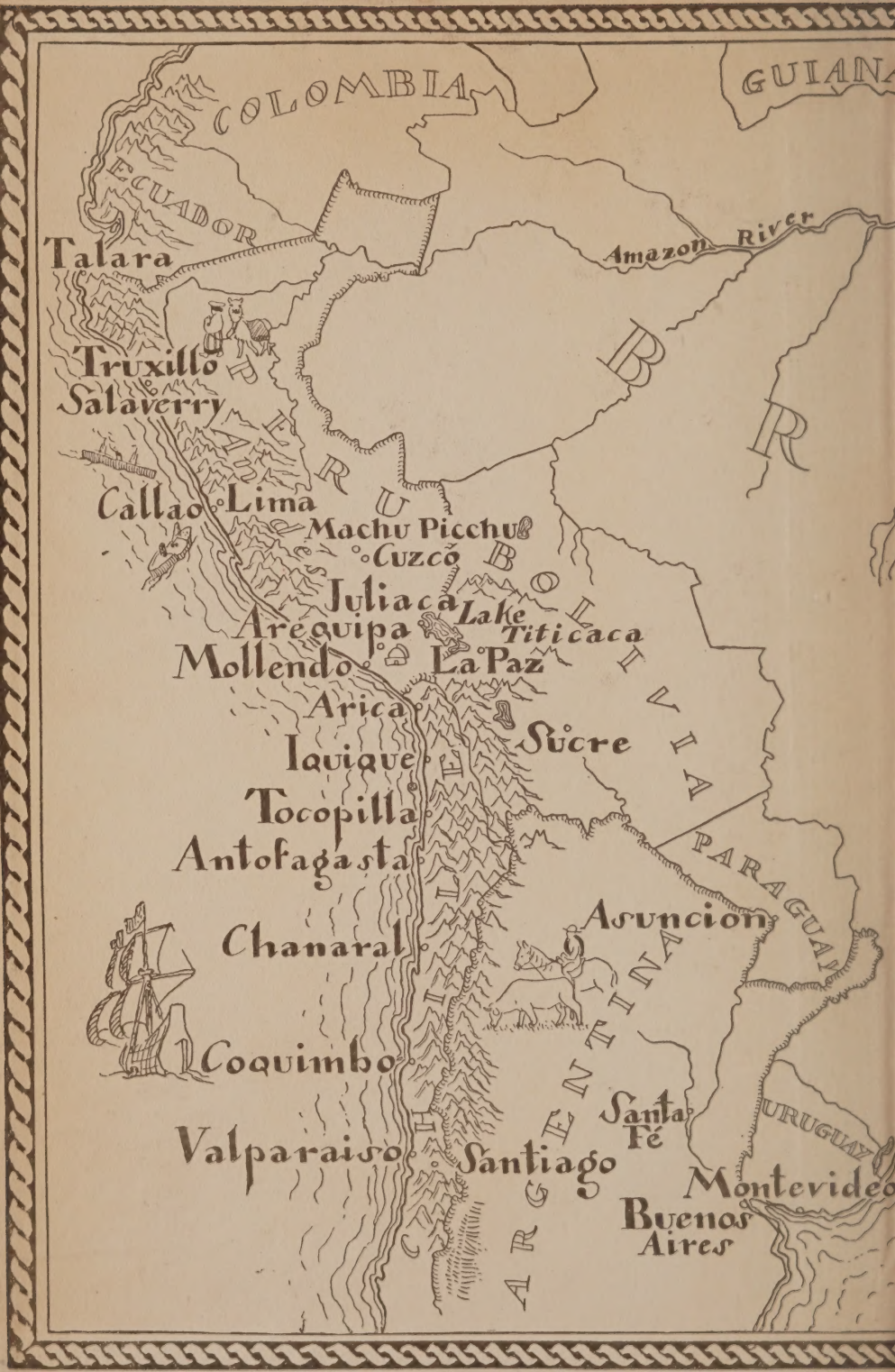
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SOUTH AMERICA

The West Coast and the East

By Agnes Rothery

SOUTH AMERICA has always been a continent loved by the poet, the artist, and the adventurer. Now, because of its recent economic and political developments, it is one of the most important continents from the point of view of the twentieth century business man. Miss Rothery's new book supplements her 'Central America and the Spanish Main.' It contains the latest and most authentic information for the student who wishes to learn more of our great neighbor to the South, and fills a definite need upon the travelers' shelf. The standard works on South America are so out of date as to be useless for practical purposes. Here, at last, we have a volume which gives precisely the information that is wanted by any intelligent traveler to South America.

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The West Coast and the East

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THE HIGH ALTAR

A Play

MISS COOLIDGE

MACHU PICCHU, ANCIENT CITY OF THE INCAS
Each ward of the city had its own entrance

SOUTH AMERICA

The West Coast and the East

BY

AGNES ROTHERY

With Illustrations

BOSTON AND NEW YORK
HOUGHTON MIFFLIN COMPANY
The Riverside Press Cambridge
1930

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TO MY TWO NEPHEWS

JOHN LORING ROTHERY, Jr.

AND

KNOX BRECKENRIDGE BURGER

HOPING THEY WILL LOVE THE SEA AND THE LAND
OF MANY CONTINENTS

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INTRODUCTION

It was not long ago that a voyage around South America meant months and months of tossing upon almost uncharted waters. Not long ago, as Herman Melville says, that 'certain long-haired, barenecked youths, who, forced by the united influences of a roving spirit and hard times, embarked at Nantucket for a pleasure excursion to the Pacific, and whose anxious mothers provided them with bottled milk for the occasion, oftentimes returned very respectable middle-aged gentlemen.'

With the cutting of the canal all that is changed; the largest of the Grace liners, providing their passengers with swimming pools, and well-ventilated staterooms, with caviar and champagne, make the voyage from New York to Valparaiso in a matter of twenty-one days. And if business presses, one may send trunks ahead to the steamer, and leaving New York several days later rejoin by airplane both trunks and steamer at Havana or Panama. The regular seven-day air-mail service between New York and Buenos Aires will doubtless soon include seven-day passenger service.

However, this lessening of time and shortening of distance has in no way weakened the dramatic import of the voyage. It has heightened it. The tropical air above the verdant isthmus used to be faintly stirred by the tinkle of mule bells, announcing the slow transport of treasure, torn

from the palaces of the Inca, and destined to adorn those of the King of Spain, and to fill his diminished coffers. Now that same air is pierced by the whistle of a locomotive pulling its coaches from Colon to Balboa: it is displaced by the huge bulk of ocean liners pressing up the narrow channel, being raised and lowered in the mighty locks. It is reft by the incessant vibration of airplanes skimming from ocean to ocean in half an hour — suggesting gigantic and benign mosquitos — a sort of practical Yankee joke — superseding the smaller, villainous species banished two decades ago.

By water, by land, by air, the Isthmus of Panama is traversed daily, hourly by all the nations of the world. Even a child, staring over the polished rail of an ocean liner, can see the continuous threefold weaving of commerce which has supplanted the laborious hacking through the jungle — which was the only way the Spaniards knew of passing from ocean to ocean. But the child does not see the most significant, the most exciting communication — conflicting, coöperating, pushing and pulling ten thousand invisible wires, flooding ten thousand invisible channels. And neither does the man who does not turn his inward eye upon such seeing.

The great continent of South America lies lapped by its oceans and teeming with its wealth. Its history is brilliantly complicated: its peoples a unique product of evolution. For years Europe and the United States disregarded the confused signals of their little-known neighbor. The small boy droned out from his geography book that bananas and parrots were imported from South America,

and when he grew to be a man he knew hardly more than this.

And then, quite suddenly, Europe and the United States began to see that there were other possibilities — many others — and across the Isthmus of Panama international tension was instantly drawn taut. Germany discovered a market for her manufactured articles and a base of operation for her young business men. Spain launched into eloquent propaganda about the love of Castile for her daughters, about 'spiritual reconquest,' about the language of Cervantes. France, whose thought and literature had long moulded South American taste, not only sought to attract South American students and travelers, but created the Alliance Française in South America subsidized by the Government. She strengthened her cultural ties in a dozen clever ways and saw to it that the French language, literature, and history were taught in schools throughout the various republics, and French books and periodicals well supplied to the Latin American public. The Italians acquired the rich coffee country in the state of São Paulo in Brazil, outnumbered the Spaniards two to one in the Argentine, and created in Rome the Institute Cristoforo Colombo for the encouragement of cordial reciprocal relations. France, Spain, Italy, and Germany each established in Argentina an 'Instituto' or 'Asociación' or 'Universidad' to bring their distinguished lecturers to Buenos Aires.

And finally the United States rubbed her eyes and began to wonder if the words 'Monroe Doctrine,' even if reiterated in varying keys of cajolery, exhortation, or

threat, really met every exigency of relationship between itself and subtle, sensitive, and rapidly developing republics, with whom our export trade increased more than twenty-five per cent during the first eight months of last year, as compared to a gain of eight per cent to Asia and four per cent to Europe.

Over and across the Isthmus of Panama, up and down the uncomprehended length and breadth of the vast continent of South America, now run a thousand currents and counter-currents of economic and political and racial interests, of sincere idealism, of legitimate commercial reciprocity and jingoish poppycock.

The United States, more and more uneasy about its once omnipotent slogan, and unable wholly to refute the accusation that it has been used not only to keep European powers from interfering with Latin America, but to sanction its own interference, now stresses the word Pan-Americanism. She revolves the facets of freshly cut oratorical gems to prove a partnership 'quick with common sympathies and common ideals' between two continents whose principal likeness is that both were unfortunately named after an Italian who did not discover the one and who never saw the other.

And thereupon Spain, not to be outdone, responds with a sort of antiphonal chant about Pan-Hispanism, sometimes elaborated into Pan-Iberianism to propitiate Portugal and Brazil. She has proposed a Hispanic American University in Seville, and founded a Royal Hispanic American Academy at Madrid. England quietly continues to build railroads and to operate them: to extend

credit and establish banking-houses. Germany and England vie with Italy and with each other in swift and luxurious liners between South America and their respective countries. France maintains her policy of sending scholars, lecturers, and intellectual ambassadors to represent her in cities already bound to her by ties of taste. It is obvious that the time has come when the salesman from Chicago as well as the young consul from Washington must be plainly informed that if he wishes to succeed in South America he must learn Portuguese for Brazil as well as Spanish for the other republics, and must also acquire different table manners and address from the ones which meet the less exacting standards of polite society in the good old U.S.A.

And in the meantime the South American Republics reveal a restiveness at this belated and self-appointed interest in their welfare. It is more than possible that they may unkindly suspect that each of these flattering seekers for their favor is chiefly anxious to crowd out the other, and gather as many rich pickings as possible for itself.

Why all this display of energy and tact toward a continent still only most superficially comprehended by the average North American? Because there is money to be made? Partly. But one does not send opera singers and university professors and diplomats of the highest grade to charm nitrates from the soil of Chile, or hides from the cattle of the Argentine pampas. Europe and the United States, as well as Mexico and Canada, are bending their energies to win the confidence of the South America Republics because they have come to realize that they are

countries not only of economic but of political and cultural importance. South America is a world of its own — a world of color, of gold and glory, of blood and tears. The prospect of its future outruns the imagination of man.

It is for this reason that every year more and more travelers turn their faces southward. They want to stand upon the ruins of the Inca civilization, which in some respects equaled that of Egypt. They want to look upon the superb architectural *tours de force* in what were once colonies of Spain. They want to talk with Peruvian women whose white hands have never performed a stroke of manual labor, but whose dark eyes and fine brows reveal quite a sufficient intellectual capacity. They want to meet the energetic Chilean, the gaucho from the Argentine pampas, the gay and gentle Brazilians, living in pergolaed and terraced houses high above the most beautiful bay indented on the globe.

A new world — and a new world accessible to travelers and hospitable to them. A new world endowed with a thousand natural wonders of mountains, rivers, jungles, and high plateaus: with a thousand man-made wonders of ports and palaces, of cities and pleasure resorts.

The Isthmus of Panama is narrow indeed. So are the neck and throat of a human being. But through it runs his spinal cord. The more one learns of North and South America the more extraordinary seems that bit of land connecting and severing them. Across it has surged four hundred years of world history. Through it ramifies to-day the intangible, the indestructible tides of human antagonisms, ambitions, and affinities.

SOUTH AMERICA

SOUTH AMERICA
The West Coast and the East

CHAPTER I

TALARA AND CHAN-CHAN: A CITY OF OIL AND A CITY OF SAND

Misconceptions about the equator are not confined to Aristotle and Pliny, who agreed that it was an uninhabitable zone so torrid that the earth around it was charred, and that only marine salamanders — whatever they may be — could exist in its boiling waters. Twenty centuries later, we read of Drake bleeding his men when they crossed the line — although a little blood-letting more or less in those sanguinary days seems hardly worth mentioning. When in 1531 the Spaniards reached Tumbez and Pizarro made his first landing, they were puzzled to find the climate getting continually colder, and their historians tell us of their bewilderment. As a matter of fact, Tumbez happens to be almost precisely on the line, where the peculiar climatic conditions begin which continue for about two thousand miles down the coast. It was not surprising that the Spaniards should be perplexed at the temperature they encountered, but it is surprising that in an age as enlightened as our own the majority of people who live in the United States still take it for granted that

the equator means heat, and that the tropics are, by geographic necessity, broiling jungles. They are politely skeptical when a traveler assures them that on the last of the journey from New York to Valparaiso a fur coat is comfortable in the evening.

To be sure, they comprehend that heat is as much a matter of altitude as latitude, and that a mountain-top is a cold place whether it is in Tibet or Labrador. But they are only vaguely cognizant that the Antarctic Current, often called the Humboldt Current, from the scholarly German who scientifically discovered it, cools water, air, and shore for two thousand miles on the South American continent, and affects conditions in Japan just as the Gulf Stream warms them on North America and affects conditions in Europe.

In conjunction with the Andes Mountains the Humboldt Current has created one of the most fantastic strips of scenery in the world. The Andes rise to such a height that winds from the east lose their moisture by condensation before they can reach the Pacific Coast. The cold waters of the Humboldt Current so chill the air above it that precipitation of rain is prevented. And so between the chill blue waters of the Pacific and the snow-capped Cordilleras there runs a coast range through the very heart of the tropics which feels rain perhaps an hour in the course of a year, perhaps never once in a dozen centuries.

A fantastic coast, indeed, of wild cliffs and jagged promontories, mauve and beige in the sunlight of midday, deepening into crimson and lavender in the evening, and floating along the water's edge in pastel iridescence in the

sunrise. There are islands glistening with the snowy deposit of the guano birds, like huge lumps of rock crystal. There are deep purple fjords and sweeping bluffs of decomposing igneous rock which the wind and weather have carved into sculptured forms. The geologist will explain that this coast range, which is the third known to scientific knowledge, is continually readjusting itself, and that it is this readjustment which creates earthquakes and tremors. He will add that it is steadily rising, just as the east coast is steadily sinking, but fortunately this particular moving picture is slowed down beyond the perception of any one but a geologist. To the astonished traveler, snugly bundled in a steamer rug on a July day, the stately procession of mountains, its colors like streaming banners in the changing light, muffled and revealed by the passing clouds, seems to march day after day beside him, as if to prepare his mind and emotions for a proper and ceremonious entrance into this strangest of tropics.

And even so he is not prepared.

Talara, the first stop made by the Grace Line steamers, three days after leaving Balboa, is entirely incredible. Not because it is an especially interesting place, but because it is the first Peruvian port and the first of those settlements peculiar to this region and to this industrial age, as the cliff-dwellers were peculiar to theirs. Talara has arranged its neat barracks-like settlement on the flat top and ledges of what look like gigantic sand hills. Here in amicable work and play live the Americans, English, Canadian, Irish, Scotch, and French, who are employed by the International Petroleum Company of Canada, a

subsidiary of the Standard Oil. They have their wells, their refinery, and their shipping, for their business hours — and as Talara oil is the highest grade found on the globe, presumably they have their pride in it — and they have their clubhouse and swimming-pool, tennis court and golf links, for recreation. There are schools for the children — those conspicuously healthy testimonials to the virtues of powdered milk — and there are movies and bridge for the women. There are even a few flower gardens, with calendulas and geraniums tucked up close to some of the houses and moistened by water piped from the Chira River, over thirty miles away, and carefully filtered. At the opposite end, and separated from it by an arch, is the Indian settlement with its native market, serving as our first introduction to the people who were once sole masters of the land. Sturdily built, heavily featured, and not without a certain massive gravity, the aboriginal inhabitants of Peru have somehow emerged from four centuries of unimaginable tortures, maintaining their peculiar dignity of carriage and glance. Now the sedate Indian children attend, with casual regularity, the company's excellent free schools. The boys play soccer and the women bend over their gas stoves and run their sewing machines with the same imperturbable mien with which their ancestresses tended an open campfire and wove their primitive garments.

If you have a sentimental craving to put your foot on Peruvian soil, Talara is the place to do it, for the soil reveals itself as far as the eye can reach, unabashed and in complete nudity. To be sure there are a few dusty palms

planted here and there, with a protecting wire frame around them, but the characteristic trees of Talara, and of the near-by settlements of Negritos and Lagunitos, are the iron derricks of the oil wells. There are groves, files, and forests of these iron trees, and they bear rich fruit— twenty-six thousand barrels of oil a day! But of green verdure there is none — not leaf nor blade of grass as far as the eye can reach.

The oil derricks crisscross against the sky for many miles after we have left Talara. They stand out so boldly that we lose sight of some smaller crosses set in the sand in regular lines — the markers of the Indian burial ground. Here, beside the graves, the Indians sleep one night in every year. Occasionally passengers on the big steamers laugh heartily when told of this custom, and think it great fun and a sign of their freedom from superstition, to kick away the sand and pilfer a bit of pottery or fabric from the grave, and carry it off as a souvenir. It is not recorded that the Indians remonstrate. For centuries now they have accepted the white man's deeds as evidences of his superior civilization.

But if Talara, treeless and grassless, is strange to our eyes, Salaverry and Trujillo are even stranger. For Talara is a new and artificial settlement, created for the obvious purpose of oil wells, while these others are old — Trujillo was founded by Pizarro in 1535 and named for his birthplace in Spain, and Salaverry commemorates a mighty general of Peru, afterward one of its presidents — and one associates age with meadows and mossy walls and ancient trees. But except for the occasional streams which run

through the sand, here everything is the color and substance of dust. The walls which line the gray road are of gray blocks of earth, pressed together with a little moisture and baked in the sun, and standing thus for years in the rainless air. The few trees are veiled with dust. The houses, too, are of adobe, that, on those occasions when there is a shower, inconveniently melts away. We shall become familiar with this starkness before many more days have passed, but we have not been here long enough as yet fully to appreciate the fact that the whole coastal zone of Peru is desert — as blank and baked as the Desert of Sahara, except for half a hundred rivers, some of them mere trickles of water, which rise on the western slope of the Andes and descend directly into the sea. And upon this lack of rain hinges the history of the nation.

A few pages of that history we shall turn to-day, as we set forth to see Salaverry and Trujillo, and beyond them the long lost capital of the Chimu Empire — Chan-Chan, the city of sand, which endured for hundreds, perhaps thousands of years before the civilization of the Incas, and whose outlines we may still trace, extending for about half a score of square miles over the desert waste.

To get to Chan-Chan, and to get to Trujillo, we must pass through Salaverry, and little there is in the appearance of this port to suggest that it is third in importance in foreign trade in Peru, and that the chief of its exports is sugar. In fact, the Trujillo district furnishes half the sugar crop of Peru — growing, of course, under irrigation.

For although there is so little rain in this region that it may truthfully be described as rainless, yet from earliest

times there have been intricate and extensive systems of irrigation. To-day, of the four or five million acres of land probably under cultivation in Peru, eighty per cent is irrigated. To be sure, this is only a small proportion of the irrigated land which the Spaniards found. C. W. Sutton, the American who is in charge of the present irrigation projects of the Peruvian Government, estimates that in 1530 Peru had a population of between ten and twenty million. The same amount of water that is available to-day watered three times as much land, and this supported two and a half times as many people. Since 1919 the Government has been engaged in a systematic policy of irrigation, bringing approximately fifteen thousand acres a year under cultivation and colonization. Farmers are allowed to purchase on easy payments extending from twenty to thirty years at about one hundred and twenty-eight dollars an acre. And surely there could be no more hopeful sign of genuine and rational progress in a country whose soil, with water and labor, is as fertile as Paradise, and whose people are peculiarly fitted for agriculture.

We leave the port of Salaverry — an open roadstead with piers and cranes and chutes for loading sugar —and go by automobile, which is more agreeable than taking the train, along the hard and untracked beach to Trujillo. Las Delicias, the way is called. The waves run up before the machine, and as they recede we speed over the shining sand, while hundreds of sea-birds fly before us.

The ancient city lies along gray streets, behind gray walls. And out of the naked earth reach up into the bright sunshine oleanders and cactus, olive trees and bananas,

while over the adobe walls bloom lantana of orange and pink, and morning-glories of an intense celestial blue. There is activity in Trujillo, for the sugar industry is not seasonal, since the absence of rain makes it possible to cut and grind throughout the year, except for a few weeks in May and June when the mills are being repaired. Planting also may be carried on in every month of the calendar. Sugar cane was first introduced into Peru in 1520, but the modern industry dates back only about half a century. Chile is the best market, and then Great Britain, the United States and Bolivia.

But Trujillo claims other distinction than agriculture and commerce. Antique carved balconies, elaborate doorways of stone opening with heavy doors into tiled patios, the plaza and cathedral remind us that here wealth and fashion have been statelily housed. And when President Leguia founded a university there in 1921, it was in recognition of the significance of this northernmost of Peru's coast cities, and the third in importance and size.

Trujillo is old, as cities go on the Western Hemisphere, but it is young indeed when we think of the former metropolis that once extended over this site — Chan-Chan, the capital of the Chimus. All that is left of those once mighty walls now lies like drifts of sand upon the plain beyond. And yet, although they are almost completely destroyed and we know so little about the people who built them, there is something about these ruins as impressive as anything we shall see in South America.

The Chimus appear to have come from the north long, long before the first Inca emerged from the sacred Island

of Titicaca. And they appear to have possessed a king and a court and a culture which they set up in toto in this bright dry region. A. Hyatt Verrill in his recent book, 'Old Civilizations in the New World,' says that their skulls are similar to Maya skulls, and suggests the possibility of their having been driven from Panama by the eruption of Guacamayo. However that may be, we do know that their empire extended from what is now the Ecuadorean border to Lima — about ten thousand square miles — and that where we stand to-day was the capital of it all.

Any one who has seen pictures of Chan-Chan as it was before 1925 is nonplussed by the formless ruin which now confronts him. The Chimus built with an adobe made of coarse gravel mixed with clay or cement-like mud. The walls were of tremendous thickness and they stood intact for centuries — how many centuries we can only speculate. They were impregnable to assault. The fortress was made with parallel walls, the outermost one seven hundred feet long, and the innermost six hundred, with salients jutting out for ninety feet. Arrows could not pierce such defenses. Enemies could not scale them. Battering rams could not level them. But there was an element which could wipe them out as figures are erased from a slate, and that element was unknown to the builders. Rain alone could destroy Chan-Chan, and for hundreds, possibly thousands of years it stood under rainless skies. The designs moulded upon the façades in bold and regular relief, by a process we do not understand, were brilliantly emphasized by the painted background, and these colors, too, endured undimmed through the passing

Deaths with equal lustre, nor omitting Ceremonies of bravery in the infamy of his nature.'

Fortunately there is at the Larco Hererra Museum in Lima such a well-arranged and full display of huacas — burial relics — that we can reconstruct much of the life of this people. The pictures on their pottery, and the shapes of the pottery themselves, depict their clothes and musical instruments; their agricultural implements; their methods of fishing, hunting, and fighting. There are huacas which prove that the Chimus knew how to amputate limbs, crown, fill, and bridge teeth, trepan skulls, and even perform abdominal operations. They not only smelted gold, silver, and copper, and knew how to weld, press, and spin them, but they had mastered the secret of perfect metal-plating, as evenly done as by our own electrotype process. They worked mosaics in ivory, bone, colored shell, and mother-of-pearl.

What happened to the Chimus and their mighty empire? Mr. Verrill, who offers the theory of their appearance, is not without another for their disappearance. He tells us that when the Inca Empire began to extend its power in Peru, there was inevitable conflict between them and the Chimus. But valiant fighters as the Indians were under their Inca, they were unable to take the great fortress of Chan-Chan. When they were finally convinced that direct assault was useless, they withdrew from the town and built a dam across the river which supplied the Chimus with water. The fields withered; the people died by hundreds. But those who were left still refused to surrender. But when the Inca sent word that if they did

not surrender he would put out the sun as he had already withdrawn the water, that was too much for the Chimus. They surrendered.

For a long period the culture of the Chimus coexisted with the civilization of the Incas. At the time of the Conquest the empire had long since passed away, but the Spaniards found Indians in the vicinity still speaking Mochica or Gunga. And they stumbled on a few legends — as that of how a certain Chimu king solved the problem of not destroying his people's faith in his immortality by secretly shutting himself up and sealing himself in an underground vault when the time came for him to die. An heroic solution, but one that seems to have served its purpose.

To-day there are still left walls fifty or sixty feet high to mark the place where once a city extended from the sea to the foothills. Even yet they have not been leveled either by man or the elements. The wasps fasten their nests upon them in the perfection of delicate masonry as they may have done two thousand years ago. For in the march of ages there are many paradoxes, and often it is the ephemeral which, renewing itself, attains fragile perpetuity.

CHAPTER II

CALLAO, HARBOR OF HOSPITALITY

Callao is not only the port of Lima. It is port to all the world. In and out of its harbor stream vessels bearing flags of every color and device, and out of the traffic is left, yearly, monthly, a human residue. In Callao are apple-cheeked youths named Perkins and Parsons, who speak English with a Spanish accent; there are other equally blond ones who speak Spanish with a German accent. There are Peruvians who learned English in France. There are yellow-skinned merchants and black-skinned laborers.

Callao has always been hospitable to the stranger. A Venezuelan and an Argentinian once chose it as their home in preference to their respective countries, and the house where they lived together in Magdalena Vieja is now a museum, commemorating Bolivar and San Martin. A delightful museum indeed, furnished not only with the documents and flags and proclamations of war and pictures of battles, but with many personal trifles: the folding camp-beds of finest marquetry which went to battle with Bolivar, the inlaid velvet-lined trunks which carried his always elegant costumes, and a dainty workstand which reminds us that the handsome widower was never without a feminine companion. The thick wall between the two bedrooms occupied by San Martin and Bolivar is cut through in a small opening. Here stood the single candle which lighted

both chambers, with a miniature chimney for the smoke and on either side a flap, so that whoever preferred darkness could shut out the light.

Callao has also extended hospitality to more recent foreigners. At Ancon the trim and progressive government naval aviation base is under the direction of an American, Captain B. H. Wyatt, a lieutenant in the United States Navy, who mapped the Alaska coast and discovered the Colorado oil deposit. Out at La Punta the sparkling Naval School, founded by the United States Naval Mission, has been under Captain Charles Gordon Davy, also of the United States Navy, since 1921, and a magnificent testimonial it is to its director. For a one-time demoralized institution has been brought up to the first rank of discipline, physical requirements, and scholarship, with schools for naval cadets, recruits, naval apprentices, radio electricians, and electricians. There are thirty-six officers, two civilian instructors, and a priest, and the school is the directing center for all naval communications, particularly all radio communications, and all merchant-marine officers must pass its examinations.

All through La Punta are English and Americans, and they continue along the shore to Miraflores and Chorillos.

One of the foreigners to whom Callao extended a welcome was an Irish lad of eighteen who arrived upon its shores eighty years ago. He came with his father, who had somehow conceived the idea that it would be profitable to farm in Peru. The farming did not prove successful, and young William R. Grace found a place in the guano shipping trade, with John Bryce, a Scotchman — and that was

a crop that yielded a harvest indeed. He fell in love with the daughter of a Maine shipowner and captain, followed her to the Pine Tree State and married her, and being forbidden to return to the climate of Peru settled down in New York. Here he became an American citizen, and served the city as mayor for two years. In the meantime, the business in Peru was in charge of a younger brother Michael. William R. Grace prevailed upon the ship builders of Maine to build larger vessels for the South American trade and felt highly elated when they made the trip around the Horn in a hundred sailing days. Sailing vessels gave way to steam. Steam is now being superseded by motor vessels and those driven by turbo-electric power. Now there are twenty-eight passenger vessels and freight ships in the Grace fleet, supplemented by weekly air service between the Canal and Santiago de Chile. The House of Grace possesses important interest in the three principal Peruvian cotton mills, has vast interests in sugar, nitrate, and textiles, all up and down the West Coast, and has prospered so mightily that at one time it was able to lend Peru twenty-five million dollars, and save the country from disaster. Thus the Irish lad who came to Callao to farm repaid the land of his adoption.

There are many exports beside the guano in which young William R. Grace traded passing through the busy water-front of Callao to-day. Trains chug back and forth, bringing down copper from the Cerro de Pasco mines, and cotton from the departments of Lima and Ica — over fifty thousand tons of the latter in the last report. Pizarro found cotton growing in Peru, and since then it has become the

country's most important crop. It benefits, as does the sugar cane, from the peculiar conditions of the region: no hail or frost to injure the growing crops, a uniform climate throughout the year, and an average yield per acre greater than that of the United States. The native variety is so fine that it is called vegetable wool, is spun on woolen machinery, and used in making wool and cotton mixtures. It grows from ten to fourteen feet high and requires only one yearly irrigation. The Tanguis variety, which is not grown in the United States, gives two or three crops and yields twenty-five to thirty per cent more than the other varieties. We also take large importation of the Peruvian rough, and the Mitafifi, which is grown from an Egyptian seed, bears two crops a year, and has a smooth silky fiber, an inch and a quarter long.

Despite this practical commerce, there is a romantic atmosphere about the port whose streets seafaring men have trodden for four hundred years; about the horizon of its waters which have been scanned by the slant eyes of the Oriental, the liquid eyes of the African, and the cold blue eyes of the Nordic. Many steamers discharge their cargo directly at the docks, but the largest ones anchor out in the harbor, and use small boats for landing and taking on freight and passengers. These small boats come in to an enclosed harbor, with stone steps placed in quite a Venetian manner. Pelicans squat gravely on the long stone mole, or at the base of the lighthouse, and on the water float enormous jelly fish with neatly marked umbrella tops and lower parts best left undescribed, as Garcilasso says, 'for propriety's sake.'

The city itself, which lies almost due south of New York, is a peaceful little place, although it has had plenty of history in four centuries. It has been bombarded, wiped out by earthquakes, riven by revolution. And on its fort of Saint Philip the flag of Spain floated for the last time on the mainland of the New World.

CHAPTER III

LIMA AND THE PLANS OF PIZARRO

Lima, laid out checkerboard fashion around its central plaza, with smaller plazas and more checkerboard streets mapped at agreeable intervals, is the unique example in the Western Hemisphere of a Spanish city imposed fully proportioned upon absolutely virgin and savage territory and maintaining that original plan, that original plaza, and those original streets for four centuries. Lima did not gradually evolve from a handful of soldier camps. Her streets were never casual and crooked footpaths. The Lima we see to-day is the Lima Pizarro planned. He himself laid the cornerstone of the cathedral and outlined the boundary of the Plaza de Armas. The streets where his brothers and his friends lived were as straight and broad — or as narrow — in 1535 as they are in 1930.

Of course, this does not mean that the present city is identical with the original. Two cathedrals have followed the first primitive one; the magnificent second having been destroyed by an earthquake in 1746 and the present one rebuilt and finished in 1758. Electric lights illumine the 'portales' once flickeringly revealed by torches. Buses, trolleys, and automobiles crowd the avenues. Within a brief half-dozen years most of the paving of the streets has been accomplished, and suburbs lined with green English lawns instead of gray Spanish façades have grown up along the shore and in the foothills. It is inevitable that the

capital of a great and growing country should grow and change. Lima is not a static show place, but an animated metropolis with moving-picture houses, hotels with private baths, and all the rest of the necessities and luxuries of the twentieth century. Because it is fulfilling the destiny for which it was chosen, the hasty traveler with a few hours' furlough from the passing steamer too often gives it a superficial survey and departs, disappointed. He has not seen a llama or a barefooted Indian: the city is not new enough to compare with those in the United States, nor old enough to vie with those in Europe. It is dusty in summer and damp in winter. Adiós a Lima!

But the hasty traveler is wrong, as he frequently is. Beneath the transparent veneer of modernity the old Lima lies almost precisely as it was originally planned. It takes more than two hours to retrace it, however, and longer still to appreciate how profoundly it has affected the culture of the entire New World.

Pizarro had been exploring in Peru for three years before he founded Lima. This unlettered adventurer — he could not even read or write, and the painter who depicted him in the portrait in the Municipality with a scroll in his hand was more of a politician than a faithful recorder — had no comprehension of the value of the social organism which he found in Peru, and attacked and destroyed. In that period when the majority of men were brutal and ignorant, Pizarro, endowed with more than average powers, was more brutal and ignorant than the average. His only object in entering Peru was to find gold. When he encountered a highly developed and prosperous people stand-

ing between him and the gold he slaughtered them wholesale, as a matter of course. He first plundered and then tore down their miraculously built temples, broke their idols, murdered their chiefs in treachery and with unimaginable cruelty, and then set up the Cross as a symbol of victory. He was a man of amazing personal courage. He had the kind of bravery and brains necessary for handling the rough brigands who made up his army. He was a religious zealot and a patriotic one. His fervor and his force made him the most terrible and effective weapon Spain could have possibly had for her purpose at this time.

But in spite of his shortsightedness in destroying so many of the very things which would have helped his colonization, such as the irrigation system of the Incas, he had a sort of statesmanlike vision of the future. When he decided that he must found a capital city for his conquered territory he sent out a commission to find a proper site. He was at Pachacamac — the holy city of the Incas which he had overthrown, and from the silver of whose sacred temple he had made shoes for his horses — when he received the report of the commission.

He had been intelligent enough to refute the popular conviction that a capital should be inaccessible for the purposes of defense and safety. He had demanded that they find a spot that would be easy of approach for both people and ideas from Europe. Such a site the commission now reported. It was near the sea, they said; it appeared to be healthful; it had wood and water and cultivable fields. Thereupon Pizarro promptly ordered twenty-six residents from Jauja and thirty from San Gallan to re-

move their residence thither. These with a priest and eleven officials immediately entered Lima, which commenced its existence as a town. This event occurred on the 6th of January, which is the Diá de los Reyes, or the feast to celebrate the visit of the three magi kings to the infant Jesus. (It is on this date that Spanish children put their shoes on the window-sill for the magi kings to fill with gifts.) Three days after the foundation of Lima the cabildo was installed.

And now, as easily as a small boy might carve a toy city out of a piece of soap, so Pizarro carved out his municipality — its streets, its government, and its laws. From here all Spanish America, including the Argentine, was governed, until Buenos Aires set up its own Viceroyalty in 1776. And from that day to this Lima has continued as the capital city of a great country. That is why it is so fascinating a place to study, for it still holds before our eyes, in stone and bronze and in carved wood, the testimonials of domestic, religious, and civil life as it was approached by the Spaniard in the New World four hundred years ago.

The Plaza was then, as it is now, the center of the people's life. The Russian Soviets, who are attempting the social experiment of reducing home life to the minimum and having common halls for recreation, dining, and study, have not hit upon a new idea. In Latin America, as in Latin Europe, the Plaza has always been a communal gathering-place. To-day the people press close in the rainless Plaza de Armas to listen to President Leguia, as they pressed once before to hear San Martin proclaim Peru's independence from Spain. They congregate there to dis-

cuss matters both public and private; the school children play their games there; the promenaders stroll back and forth; lottery booths and fruit stands press close about it. All the panoply of religious and military processions which color the life and emotions of the people centers in the Plaza. The Municipal Palace in which Pizarro lived, and where he was murdered, is on one side and still used for its original purpose. The cathedral where he is buried, flanked by the archbishop's palace with its deeply carved balconies overhanging its white façade, is on another side. On the remaining two are shops and offices built over arcaded 'portales,' which give shade and shelter to the sidewalk below. It is the conventional and invariable lay-out of all cities built by Spain, and one which becomes familiar and dear to the visitor in Spanish America.

The Plaza de Armas has been the invariable scene for all public rejoicing and lamentation. After the earthquake of 1655 Pedro Castillo, standing above the heads of the crowd, exhorted them to repentance if they would avert another disaster. So terrified were the poor Limeños, having been already shaken and demoralized by the earthquake, that they precipitated themselves into a frenzy of penitence. Every one rushed to confession. Wealthy men gave up their fortunes. There was general fasting, and around and around this very Plaza, so bright and cheerful to-day, there wound a procession of men and women in crowns of thorns, in sackcloth, in chains, carrying heavy crosses. Some bent over with their backs bared, while others walked beside, lashing them. 'The awful procession moved slowly amid distressing groans, sobs and sighs, the

clamor of bells, the clanking of chains, and the hissing of lashes,' says an old historian. Although the earthquake had not killed any one, many now died from wounds and exhaustion. Your true Limeño never does things half-heartedly!

Only a few blocks from the Plaza de Armas is the Plaza de la Inquisición — a quiet, rather irregularly shaped spot of green, with a statue of the Liberator in the center, and the most imposing new House of Congress at one end. It is, however, the drab-colored, classically proportioned building where the Senate meets, that draws the eye and the imagination. For this was the home of the Inquisition, and in this peaceful Plaza a hundred people were burned and over three hundred publicly beaten with rods. The power and jurisdiction of this body extended to the most remote of Spain's possessions in South America. And what a power that was! Power not only over the lives and property of every human being in a vast continent, but over the very thoughts in their heads. The inquisitors, their agents, and their property, were exempt from taxation and all burdensome contributions. Butchers in the city were required to furnish them with meat free of charge. Naturally, these posts were eagerly sought, and very soon there were forty familiars in Lima instead of the twelve for whom provision had originally been made. For only the inquisitors were safe. Such pressure was brought to bear upon the faithful, and such fervor abounded, that wives denounced husbands, brothers sisters, friars their companions. The testimony of 'accomplices of the prisoner, infidels, Jews, criminals of all sorts, even heretics,

was accepted, provided it was against the accused, but it was rejected if it was in his favor.' In this extraordinarily handsome chamber, where we may stand to-day looking up at a ceiling of red cedar enscrolled with unparalleled richness and elaboration, sat the inquisitors. Many an agonized victim must have turned his tortured gaze up to that very carving we note with such polite admiration.

Does such legalized attempt of a few fanatics to coerce the opinions of the many sound incredible to the twentieth-century visitor from the United States? Or has he an uncomfortable recollection of certain laws in his own land which have led to the persecution of teachers for their scientific opinions? Of other laws which have led to the poisoning of citizens, rewards for spies, bribing of public officials, and to 'accidental' murder of innocent men and women? Spain got rid of the Inquisition in 1813. The mentality which thinks it can govern thought by force now flourishes in the United States.

The Plaza de Armas, with its surrounding buildings, and the Plaza de la Inquisición give us graphic reminders of the civil and religious temper of vice-regal days in Lima. There also survive monuments of the domestic and social life.

A home is the architectural embodiment of a domestic ideal. The man who builds a house with its piazza touching the public sidewalk, or its front lawn exposed to the gaze of every passer-by, obviously has quite a different ideal of what constitutes a desirable degree of privacy than one who presents to the public thoroughfare a dignified closed door, reserving for his family and his intimate friends the patio or courtyard secluded within. The latter

fashion has always appealed to the Spaniard, and every place in South America where he has builded retains the patio form. This enclosed garden, with its plants and bird cages, and frequently a fountain, is the heart and center of domestic life. If one wants to view the street and passers-by there is the balcony; if one wants gregariousness there is always the Plaza.

There are a few almost perfect examples of magnificent vice-regal homes still left in Lima, of which the Torre-Tagle is the most famous and also the most accessible, as it is now used for government purposes. The elaborately carved stone doorway with its bronze studded portals opens into a tiled vestibule. Within is a series of patios, on to which open suites of sumptuous rooms. The brocaded walls are hung with portraits of the long-dead masters and mistresses. On the parquet floor are rugs of soft color and strong weave from Cuzco. It is impossible to walk through these echoing, polished salas without revisioning the pomp and luxury of social life in those vice-regal days. In a time when importation was a slow and costly business, stone for the Torre-Tagle mansion was brought from Panama, the valuable woods from Central America, and the tiles from Seville. Opening out from the front salas are handsomely carved balconies of Moorish derivation, with latticed shutters which can be lifted. The older and more characteristic Lima balcony is a rather clumsy glass-enclosed affair, stuck on the front and along the side, like a long bay window. Now the finest new houses are favoring the carved Moorish ones, reminding us that the Conquistadores came from Andalusia, formerly a Moorish

kingdom, and that many transportations which we are used to consider Hispanic are, in reality, Moorish: such as certain household utensils and trappings for horses, and especially the manta, which the women wear over their heads. This latter is the same thing as the chumur of the Arabs.

Beside the public buildings and the magnificent private houses the Lima of long ago had a university and a library. The College of San Marcos, which is the oldest in the Western Hemisphere, was founded in 1551, in the monastery of Santo Domingo, over half a century before the English landed at Jamestown. It soon moved into its present quarters, through whose ancient connecting patios, not unlike the arcades in the University of Virginia, the ebb and flow of student life has continued uninterruptedly ever since. Although the Library would seem new to Pizarro, for it only dates from 1822, it seems venerable enough to us. It suffered fearful pillaging after the War of the Pacific, when the Chileans occupied Lima for two years and nine months, but was restored by Ricardo Palma, that most delightful of litterateurs, whose 'Tradiciones Peruanas' are still awaiting translation into English. There are sufficient manuscripts here to occupy the student, for there have been no lack of historians in Peru. The early churchmen, journeying extensively through the new country, kept diaries, which their intimate association with the people made exceptionally valuable, and which gave the Church a tremendous advantage in the actual control of public affairs.

In this connection we must mention two recent gifts of

Edward S. Harkness to our own Library of Congress. These consist of Peruvian manuscripts, of which the earliest dates from 1531 and others continue through that century into the century following. Written in the decorative script of the period, on splendid strong paper which is, even now, only a little worn at the edges, they bring vividly before us a hundred intimate details of the life of the colony. We decipher the rubrica of Pizarro — who could not master sufficient writing even to sign his name — on an authorization of a sale for certain lands and houses in Lima, dated Cuzco, April 27, 1539. We read an order signed by the Viceroy Andres Hurtado de Mendoza in 1556 that all Conquistadores or other persons who had feudal rights, or who had been married in Spain, must bring their wives over to Peru, and bachelors must suffer a penalty of loss of lands or deportation. One long narrow strip, exquisitely penned, is a tailor bill to Hernando de Soto, who before he came to North America was a commander in Pizarro's cavalry, and the first white man to see Atahualpa. There are papers signed by the elder Almagro and Ponce de Leon and Valverde: wills and deeds and bills of sale of the early community. There are game laws; the contract of a schoolmaster to teach language, writing, and arithmetic; the establishing of a chair of Indian languages at the University in 1581; the description of roads, bridges, and mines. Here are stated the price of church ornaments, the founding of hospitals and orphanages — in fact, the most complete and vivid record imaginable. One can only regret that Prescott, in his brilliant and sympathetic history of 'The Conquest of Peru,' did not have access to

them. Supplemented by other manuscripts in the Huntington Library, in San Marino, California, the modern student of this period of Peruvian history has information which has never before been available. And it is possible to reconstruct, more accurately than ever before, the public and private life which Pizarro outlined for Lima when Manhattan was only a congregation of wigwams. And the outlines of that life still exist.

There is still a church, and an impressive one, on almost every square, where the women can pray and where the distinguished dead may lie, waiting their requiem mass, while black and gold draperies shroud the high walls, and great candles flame through the night. There are cafés on every corner, where the men can drink their tiny cups of coffee or the customary thimbleful of liquor. There are extensive public buildings where officials can spend the people's money. And there are the Library and University for those who want to reflect upon the ways of the world. Thus the principal channels for human activity are well provided for.

The city which Pizarro planned he named the Ciudad de los Reyes, or the City of Kings, in honor of his Spanish sovereigns and also in honor of the magi kings, upon whose feast day the founding took place. The city which we see to-day is called Lima, which is a corruption from Rimac, the name of the river which flows through it.

If he should return to Lima — once the Ciudad de los Reyes — what would most sharply strike the fierce mediæval eye of its founder? What would most appeal to his uneducated sagacity?

Probably those rails of steel, leading along the River Rimac and then, turning, winding up and up, until in the first forty-six miles they have risen five thousand feet. They thread gorges, skirt the edges of precipices, burrow through sixty-three tunnels, and span chasms almost six hundred feet across. Up, up they climb to Oroya, twelve thousand one hundred and seventy-eight feet above the sea, carrying on every train tanks of oxygen, lest any passenger be overtaken with 'soroche' or mountain sickness. And when they reach Oroya, with the smelting furnaces and two thousand employees of the Cerro de Pasco Copper Corporation, they continue eighty-two miles farther north, to Cerro de Pasco itself, on the eastern slope of the Andes, fourteen thousand two hundred feet above the sea — one of the highest mining settlements on the globe.

The destination of the Central Railroad of Peru was not unknown to the Spaniards, and the fact that after four centuries the mines are still being worked would probably not astonish them. For the mines were practically the only things in Peru which the Conquistadores appreciated. But Pizarro would be amazed to know that, while gold and silver are still found in Cerro de Pasco, they are not what is sought to-day, and that it is to copper that the city owes its fame and its wealth.

The smelter at Oroya, the fifteen thousand men finding employment at Cerro de Pasco and its various mines, and the production of eleven million pounds in a single month would meet with the approval of the practical Pizarro. He would nod at the well-built cottages for the officials and heads of departments, the hotels for the single men, the

pleasant clubhouses with bowling alleys and billiard tables. And that the Cerro de Pasco Corporation should be developing great haciendas in the surrounding regions, where imported sheep and hogs and cattle are being raised, with wool exported to London and meat to Lima, and that they should be stocking the streams with trout — these things would come within his comprehension. For the Spaniards early recognized the advisability of bringing live stock into Peru, and introduced the first horses, cows, and swine that had ever been seen there. He would instantly grasp the advantage and logic of these things, but that the Indian laborers should not only be paid for their work, but furnished with comfortable accommodations and even with a clubhouse of their own — this would utterly dumfound our returning and ghostly visitor. For from the very beginning it was the habit of the Spaniards to round up the Indians like cattle, and work them in the mines and fields up to the last extremity of their miserable lives, and consider them repaid by a promise of the white man's heaven. Whole villages were depopulated of native men, and the bereaved women and children tilled the fields and chanted their melancholy laments. Yes, times have changed, and when we see not only the modern methods of mining and smelting and shipping the gleaming metal, but the modern attitude toward the payment and housing of labor, we realize how much they have changed for the better.

Henry Meiggs built this most audacious railroad to this most amazing mining settlement. Henry Meiggs was city treasurer of San Francisco, and he left his country suddenly, with a goodly amount of the public funds in his bag.

He came first to Chile and then to Peru, in those days when South America was the favorite asylum for fugitives from justice, and there, surprisingly, he distinguished himself as an engineer. He planned this railroad which, although it was built more than half a century ago, is still rightfully regarded as one of the engineering marvels of the world. He persuaded the authorities to tear down the old city walls which had been completed in 1690, so as to give Lima a chance to expand. Everywhere he made his impress with boldness and constructive energy, upon the new, responsive country. And not only did he perform the inestimable service to Peru of planning, building, and financing railroads which no one had ever dreamed possible, but he refunded the money he had taken from San Francisco, and had his name erased from the criminal records — probably the only act in his life which Pizarro would not understand!

Supposing, then, that our grim phantom, having been shown the railroad and Cerro de Pasco, should now return to Lima and pace the city streets. How would they appear to him? Of course, he would be confronted with the countless mechanical devices of a new age. But would even the most luxurious automobile seem as gorgeous as the scarlet and gilded chariots, with liveried outriders and footmen, in which the original grandees took the air? When La Plata, the Viceroy, rode through the streets of Lima in 1681, the mane of his horse was strung with pearls, and the pavement was of solid silver. The policemen of Lima are an upstanding and well-uniformed lot of men, but so, doubtless, were their earliest prototypes. Certain coun-

tries always have money for the paraphernalia of defense.

Despite the buses and cars and electric signs and caroling victrolas, there are still sights in the streets of Lima which are quite in keeping with the traditions of the Ciudad de los Reyes. Such a sight occurs on the eighteenth of every October, when the altar of solid silver and the silver-framed picture of the Crucifixion is brought out from the Church of the Nazarenas. The original of the picture was painted years ago by a poor Negro to whom a vision of the Crucifixion had appeared upon the wall of his humble chamber. Later a church and convent were built around the wall, and the Negro reproduced the vision that still remained vividly in his remembrance. When the Church of Nazarenas was completed, an order of colored priests and brethren sprang up — they now number more than a hundred — and the Nazarenas became the miracle church of Lima. So many were the silver offerings left before the holy picture that a massive frame of solid silver was made for it. Candlesticks and an altar of the same precious material followed. And now, when once a year a smaller duplicate of the picture is carried on a silver altar through the streets, men beg and pray for the privilege of carrying it, even though the weight is so crushing that more than one bearer sinks down dead from the strain. For three days the sacred procession moves through the streets very, very slowly, as the immense pressure can hardly be sustained by the twenty-four privileged bearers, who are changed at every block and a half. And behind the procession presses a crowd so dense that it jams the streets for miles. Altar and picture are rested at various churches

for the two nights of their travels, and by three o'clock in the morning the people, high and low, are formed in line again, ready to follow it with prayers of thanksgiving or supplication. Thousands upon thousands there are — the cripples and the sick and deformed, dragging along inside a circle preserved by the well — the healed rejoicing, the sorrowing seeking consolation. Faith and fervor such as this are indeed more characteristic of an age that is past than of the present.

If Pizarro should be taken, as was President Hoover on his brief day in Lima, to the famous Country Club at Miraflores, four miles away, he would see a handsome building surrounded by lawns, with polo grounds, golf course, and tiled swimming-pool, American girls in the smartest of sports costumes from New York, Englishmen in tweeds, Peruvian ladies in Parisian toilettes. The Country Club at Lima is as fashionable and gay as any country club anywhere, but Lima was gay and ladies were charmingly attired long before American and English business men came down to make fortunes for themselves, for their wives and daughters, and incidentally, for Peru. Before it was Lima at all, but the Ciudad de los Reyes, the pleasure-loving people of this city were accomplished in the graceful and vivacious arts of social intercourse. Even the chilly winter months, when the skies are almost constantly overcast, do not dampen their high spirits. The Limeña lady of several centuries ago valued her appearance quite as highly as does the Limeña or the American of to-day. To be sure, when she appeared upon the street she enfolded herself in a black manta, so that her

figure and all of her face but one enticing eye were completely concealed. This disguise, for it amounted to such, offered such irresistible opportunities for intrigue that in 1624 the Viceroy, the Marquis de Guadalcazar, promulgated a decree imposing heavy penalties for wearing it. But like many other gentlemen he had reckoned without his host. On the Feast of Corpus Christi the women appeared in the manta as usual, and by noon ten thousand were under arrest, including the Viceroy's own wife and daughters. Discomfited, he retired to his country-seat amid the jubilant tolling of bells.

But time accomplishes what decrees fail to do. To-day all that is left of the manta is the still more or less prevalent custom of wearing upon the streets and to church, not a hat, but a black veil or mantilla. Some of these mantillas are of delicate black net or Chantilly lace, worn with the point becomingly drawn down over the forehead. The manta, worn by the poorer classes, is of a thin black voile, that, blowing back a little as the wearer walks, frames the face in the way that Botticelli so loved. So flattering to young features, so softening to older ones, is this feminine head-covering, that it leaves one of the most charming impressions that remains with the stranger.

The first architect of Lima would be gratified, without a doubt, by the many new plazas with their conspicuously placed central statues, and their well-planted, well-cared-for gardens and promenades. The new avenues and new public buildings are a consistent expansion of the city he planned. He would pause, puzzled, however, before the Museo Larco Herrera. For here archæologists, draughts-

THE CATHEDRAL IN LIMA
Where rest Pizarro's bones

men and scholars are lovingly and patiently resorting the pottery huacas, which the Spaniards ground contemptuously under their heels and which their priests smashed as symbols of idolatry. The mummies which the Spaniards unearthed from the dry soil that had so miraculously preserved them, they stripped of their gold ornaments and flung aside. Now as the workmen, under the skilled direction of Dr. Julio C. Tello, carefully reveal stratum after stratum of prehistoric cultures, each grave is photographed and subsequently accurately miniatured in clay: every fragment of fabric and of pottery is gathered up, every bundled mummy is guarded until it can be properly unwrapped, and each of its many coverings, each of its many ornaments, numbered, classified, and catalogued — of which we shall learn more when we come to Paracus. Poor Pizarro — this would certainly seem very strange to him!

He would, without question, be proud to know that his bones rest in the cathedral, and a little chagrined, perhaps, that they have not been placed nearer the altar. Possibly he would not feel quite at home in the domed grandeur, for his customary place of worship was near the river, in the small plain two-towered church, against whose portals two bootblack stands are now familiarly ensconced. The only recorded instances we have of his attending mass elsewhere were those when, having ordered and witnessed the death of an enemy or a friend, he donned the deepest mourning and attended the funeral services in the cathedral.

And thus we may imagine him surveying the once familiar scenes of his triumph, his conquests, his labors, and his assassination, with puzzled brow. Perhaps he would ponder

over the fact that in all the vast continent which he, by his energy and will, brought under the domination of his king, there is not a single monument to him. So dreadful were his cruelties, so horrifying his treacheries, that even now, after nearly four hundred years, his memory has not been sufficiently softened for any one to suggest that his effigy be perpetuated in the land where he wrought such suffering.

And yet Pizarro has been granted fame, for he accomplished famous as well as infamous deeds. He hacked and hewed his indomitable way across unknown waters, over burning deserts, and through jungles of prostrating heat. He opened up a new world, and set over it, as its capital, a city whose charm and vivacity have survived until this day.

CHAPTER IV

CALLAO TO MOLLENDO: CERTAIN INHABITANTS ABOVE AND UNDERNEATH THE EARTH

We leave Callao and steam southward. Through the sunshine, through the tonic air. It is like the best of our autumn days. To the east undulate the mountains. They are white, they are pearl gray, they are lavender and russet. Sharp peaks and rounded slopes; straight walls and sliding inclines. Cliffs rear upward into plateaus or end in jagged promontories. Between the bastions purple chasms deepen into black.

As far as the eye can see there is no sign of man's habitation or handiwork until a little south of Pisco, where the Beacon of Tres Cruces, like a mammoth candelabrum several hundred feet high, is carved upon the seaward slope of a red hill. And what it means and by whom it was dug, no one knows.

And yet this whole region of Paracus which we are passing was once animated by moving figures, by smoke curling up from fires, by the sound of industry. For here a race came into being, developed a culture, and disappeared, long, long before the Incas, long, long before the Chimus who built Chan-Chan. And of this people the year 1929 brought amazing discoveries.

Because of the extreme dryness of Peru, human bodies laid for burial under the ground do not disintegrate. A thousand years, five thousand years are as a puff of cloud in that eternity which enwraps them. And so it is that

archæologists can lift out of the ground stratum after stratum of succeeding cultures, as the historian can turn page after page of ancient volumes, and both of them may read there the testimonials of peoples long since vanished, not only from human remembrance, but even from legend.

There are many places in Peru, and Bolivia which was once part of Peru, where such discoveries have been made. For years it has been taken for granted that the civilization of the Incas — always remembering that the word Inca means chief and applies only to the rulers and not to the mass of the people — was the most ancient. Now we know that the Incaic epoch was the third and not the first in the long history of this country. Even the Chimus may be regarded as relatively newcomers, since their culture was coexistent for a brief period with the Incaic civilization. Between this last epoch and the first there intervenes a second (of which the culture of Nasca is the most important example) and before the second there is a first — the Archaic. And to this first epoch belongs Paracus.

It might seem to the unscientific mind that the older a culture the more crude it must inevitably be. But the archæologist deduces his conclusion differently. A race of people come into being; they built their houses; they make clay vessels, and weave fabrics. They cultivate the ground. They may perform surgical operations upon their sick with amazing skill; they frequently mould the heads of children into artificial shapes. Some of them learn to work in metals; nearly all of them work in feathers. They bury their dead with reverence, putting beside them objects which were dear or which have some special signifi-

cance. And in time that whole race is obliterated or moves away and a new race comes to dwell upon the spot. And this race also weaves and cooks and sows its crops and finally

> 'Winds the secret of its antique faith
> Tight in its shroud.'

And when the archæologist comes to investigate these successive layers, so miraculously preserved in the dry climate of Peru, he distinguishes each period by the shapes of the skulls, by the fashion of the feather work, by the material and workmanship of the pottery, and by their place in the series of strata. And it may be that in the earliest epoch — or the lowest layer — the articles are of finer workmanship than in the later or higher layers. And so it has been at Paracus.

Here have been found mummies — in less than a month last year three hundred were discovered — which, unbound from the outer wrappings and the many cerements which protected them, were revealed wrapped in mantles of a softness and fineness unparalleled in previous discoveries. Like Persian shawls, about three yards long and a yard and a half wide, not of the strong primary colors characteristic of the Incaic period, but of pale yellow or delicate jade-green with medallions worked upon them, with borders and fringes absolutely whole and fresh and not injured in the slightest degree. Beside this mantle the mummy is clothed in a sort of vest and tasseled skirt, matching the mantle in color, material, and design. Vessels and yucca roots, beans and other foods from the kitchen-middens complete the story.

In each grave is also found a tiny manikin, dressed in the same succession of matching garments and serving as an index for the larger figure — a curious phenomenon peculiar to Paracus. All of these objects have been lying beneath the ground no one can say for how many thousands of years, and when the mantles are unfolded a faint odor permeates the air — an odor not unpleasant but peculiar — the odor of undisturbed ages. The Spaniards smashed the huacas — or burial relics — whenever they found them, since they regarded them as idols. But many lay too deep to catch their eyes.

As our vessel steams along the coast we see nothing of this. The Larco Museum in Lima is the place to study Paracus. Here are pictures and vertical sections and plastic models of every grave that is discovered. Here are mummies wrapped and unwrapped; skulls, natural, artificially shaped, and with evidences of trepanning and dentistry; huacas of different clays, some of them put together from fragments with the last degree of nicety, under the painstaking direction of Dr. Julio C. Tello. And together they tell the story of the habits and customs of the makers and the users.

Peru is just waking to the importance and interest of this work. Paracus and Chavin in the Andean region are the oldest cultures and newest discoveries. But who knows what may yet be found? All Peru is honeycombed with burial grounds, and far beneath the soil which perpetually embalms them lie countless forms wrapped in their luxurious garments, their feather fans and mirrors of pyrite in their hands, their jewels around their necks, and

many with masks of thin beaten gold over their faces. Like

> 'They who wrought wonders by the Nile of old
> Bequeathing their immortal part to us,
> Cast their own spirit first into the mould,
> And were themselves the rock they fashioned thus.'

And as we stand pondering that the day of life should be so brief and death's dateless night so long, what seems like a black hailstorm suddenly darkens the sky. A million motes are dancing between us and the shore. We stare incredulous, as the flying particles settle, and, like a dark curtain, begin to move over the water.

Birds! Countless millions! Squads, battalions, regiments, unnumbered hosts! The beginning and end of the dark curtain is beyond the limit of the eye. Hours pass by. The birds are still traveling onward in close formation, following and feeding upon the school of anchovies brought up from Antarctic waters by the Humboldt Current. Sometimes the vessel steams through the moving flood, and it breaks, hesitates, and coagulates again behind the stern or at the side. And not until they are sated — not once but many times, for after eating they rest upon the water until that meal is digested, and then swallow another — do these low flying legions rise, and start homeward — flying higher now, in streaming lines and whiplashes.

What are these birds? Whence do they come? Whither do they go? No traveler along this shore can fail to wonder.

The whole coast of Peru vibrates to the beating of wings. The familiar Dominican gull sweeps down around the vessels at anchor as they do in North American ports.

Dignified pelicans — called el pajáro niño, or the child bird, by the natives, because of its naïve expression — sit upon the moles. Buzzards and red-footed cormorants hunch themselves hungrily upon the buoys, and the slaty Inca tern, with its red beak and feet, and its curling tuft of feathers like white mustaches, darts daintily to and fro. There have been no lack of birds all the way down from New York, and many hundreds of many species all along the coast of Peru. But never before to-day have we seen a whirling cloud such as that we have been passing through for hours. Never, unless we have been upon this trip before, for this is the richest bird coast in the world.

The feathered barrage beside which we are steaming is composed of guanays — the guano birds. Their ancestors gave Peru one of her most profitable sources of income, and led to a trade so cruel and debauching, so fraught with ruin, that for years it provided writers with the grisliest ingredients for sea romances. All that is changed now. The guano industry has learned, along with the rest of the world, that the best business economy is based upon conservation as well as on intelligent exploitation. Now once again the guanays are protected by the Government, once again they are repeopling their ancestral colonies, and once again guano is being systematically produced, advertised, and marketed.

It is so exceedingly pleasant, standing here in the sunshine, leaning upon the rail, while that multitudinous escort whirrs below us, that we are tempted to a brief excursion into those realms of morbid horror, occasionally craved by persons who are especially comfortable.

From long before recorded time the guanays had been living on certain islands off this coast (on Lobos de Tierra, Lobos de Afuera, Macabi, Guañape, Mazorca, Pescadores, San Lorenzo, Fronton, Cabinsas, Pachacamac, Asia, Chincha, Ballestas, San Gallan). Since it is their habit to return to the same place every night, and to breed and rear their young there, gradually in the course of centuries great deposits of their excrement mounted up and up, raising the crown of some of the islands as much as a hundred feet. The Humboldt Current is responsible for the entire guano trade, as it is for so many singularities of this coast. In the first place it brings up from the Antarctic the small fish which are the only food of the guanays, and without which they could not live — fish which could not exist in the tropic waters of the Pacific. One fateful year when the warm Current el Niño, flowing south from the Gulf of Panama, unexpectedly pushed the Humboldt Current farther west, the guanays, unable to obtain their indispensable anchovies, died by the million. In the second place, the Humboldt Current, preventing rain, makes the accumulation of guano possible — for rain would wash it away, as it does elsewhere in less arid regions.

The Incas, intelligent and painstaking agriculturalists, early discovered the fertilizing virtue of guano. They used it on their crops and protected the birds, and were obliging enough to leave behind, in some of the kitchen-middens of their camps, relics of pottery and metal ware which point to a guano industry in the earliest period of the Christian era. And even to-day there is no known fertilizer as potent. For the nitrogen content in guano makes it thirty-three

times as effective as barnyard manure, and more easily absorbed by plants than any synthetic compound.

The Spaniards were not interested in agriculture. It is not recorded that they ever presented his Majesty with a bag of guano — although it might have proved a more fruitful present than a bar of gold. But about the middle of the nineteenth century Peru suddenly awoke to a realization of the commercial value of these islands. Then began a race from all corners of the globe for a commodity which could only be secured in this particular region. A score of square-riggers would be anchored at one time at the foot of the cliffs, some of them waiting for three months for their turn at the precious freight.

And then, with a promptness that reminds us of our own oil-field scandals, unscrupulous individuals got possession of the islands and began a ruthless exploitation. Chinese coolies were brought over, under some kind of specious 'contract' and reduced to a slavery as hideous as any in the annals of history. They were taken to these islands and each one forced to dig five tons of guano daily and haul it to the chutes which carried it to the waiting vessels below. Black slave-drivers with whips drove them to the task. They had no season of rest — not even Sunday. They toiled on the top of those shadeless islands day after burning day, and at night were driven to their cane huts and thrown a scanty portion of rice. They died by hundreds. Many committed suicide. We read, in the accounts of men who visited the islands sixty and eighty years ago, of those slender tortured figures laboring beyond their strength. Their fearful cries ring out beneath the

lash of the whip. The unburied corpses are kicked aside to mummify in the dry air. It is a story of such horror that even now, comfortable as we are, leaning upon the steamer's rail, we feel a pang of compassion for those sufferers, and know that those who leapt to death over the cliffs were the happier ones.

And if there was revolting inhumanity on the guano fields, there were theft and fraud of all sorts in the waters surrounding them. Any old tub was considered good enough to be a guano carrier, presumably because the owners cared more for the insurance than for the cargo. And the dishonesty of the port officials and customs officers equaled the corruption of the captains and owners of the ships. It was a bacchanal of graft and greed and blood lust. But since millions of dollars were pouring into her treasury it did not bother Peru that she was destroying the sources of future prosperity. For if human life meant little in those days, bird life meant less. The guanays were slaughtered, driven away, so disturbed at their times of mating and nesting that the islands became practically deserted. There was no bird life in Peru as we see it to-day.

And then the dark page was turned and a cleaner one was opened. The Government came to its senses. About twenty years ago the National Guano Administration took the islands out of private control. (Two islands still remain in bond to a private corporation, but these will ultimately revert to the National Administration and in the mean while they are under supervision.) The new system imposed a heavy penalty upon any one killing a guanay, and began a reconstruction of the whole industry.

Now the islands are worked in rotation, always leaving ample and congenial room for the birds. Mating and nesting couples are especially protected, and after the removal of the guano the island is left untouched for thirty months, and operations are only resumed upon it again after a thorough reconnaissance. The guano is scientifically removed, and after pick and shovel have done their work stiff brooms are brought into play, leaving a clean nesting-place for the returning birds.

It has been estimated that a single piquero or gannet produces five ounces of guano a day. If only one ounce were deposited on the island a thousand birds would produce over eleven tons a year — a million birds eleven thousand four hundred tons, or guano worth over three quarters of a million dollars. The annual output is around one hundred thousand tons, four fifths of which is used in Peru, chiefly on the sugar cane. Although this is less than the output in the ruthless days of the nineteenth century, the industry is upon a far more solid basis. Then they were drawing upon the deposits of the past with no thought of replenishing them. The new method builds up the supply as it uses it.

Robert Cushman Murphy has written a most complete account of the guanays in his 'Bird Islands of Peru.' He visited the Chincha and other principal bird islands, and gives intimate descriptions of the life upon them. He tells us that with nests averaging three to a square yard, and their owners numbering perhaps a million, each bird knows its own nest. Perhaps it is no more remarkable than the millions of human beings in a city like New York all

scuttling home to their uniform flats. But the guanays exhibit a superior discrimination, for they return not only to their own homes, but invariably to their own mates!

Serious scientific work, zoölogical and meteorological, is maintained in these high laboratories. The diseases of the birds are studied. Infection is guarded against by burning the bodies of those who die, for in colonies of hundreds of thousands the normal mortality is a thing to be reckoned with. Guards are stationed to drive away and shoot any feathered enemies who might prey upon the eggs or the young fledglings.

So that is why these clouds of guanays are blackening the sky and whitening the earth of the coast. Protected as in the happy days, they wake up in the morning in their secure rookeries, and send out scouts over the sea to reconnoiter, knowing that the day will bring them shoals of silvery fish and the night will offer them unmolested repose.

Happy guanays, but not so happy fish! For it is estimated that a single flock of guanays consume in a year anchovies equal to a fourth of the entire catch of the fisheries of the United States.

As the guanay is not the only producer of guano — for the gannet, the pelican, and the piquero must all be so classified — neither is it the only devourer of fish. From the deck of the steamer one can watch the gannet plunging sharply down from a height in a hawklike aim. A jet of water marks the spot of his unerring dive, and sometimes these jets are popping up in every direction. A large file of pelicans winging against the sky, flapping their wings

when the leader flaps his, soaring when he soars, dropping when he drops — reminds us that these great creatures, too, must find their daily food. The piquero, the gull, terns, buzzards, and cormorants line the top of every breakwater and keep the sea under constant survelliance. And these hunters from above are only a part of the enemies of the hapless finny crew. The sleek and frolicking sea lions, which are so frequently seen along the coast, follow the anchovies and other small fish, and methodically and with great gusto eat a passageway through the closely packed schools. Even at night there is no rest, for phosphorescent zigzags across the dark blue waters of the Humboldt Current reveal the lightning path of the bonitos — that voracious fish, still tireless, in its erratic swift course.

The coastal zone of Peru is indeed bare of verdure, but above and below the earth it is thickly populated, with kingdoms of the dead and of the living. The air vibrates to the whirr of wings: to the scream and call of feathered folk. The waters that bound it are the playground and battle-field for millions and trillions of fowl and fish and animals. The sky is background for long streamers of birds, for wedge-shaped groups, for solitary forms, for fanlike hosts flying out to the feeding grounds, flying back home in the twilight.

CHAPTER V

MOLLENDO TO AREQUIPA, ACROSS THE DESERT OF ISLAY

The little town of Mollendo looks undeniably drab from the steamer, but those who have been wise enough to disembark there will remember its tilted streets with Indians selling bananas and oranges to each other, with something very like affection. For Mollendo is the starting-point of the Southern Railway of Peru, which is the modern magic carpet, well vacuum-cleaned, that will carry us over the mountains, through the cañons, and across the pampas of unknown Peru and Bolivia. As an introduction to the unexpected panoramas we may now expect, it first tosses before our eyes a painted desert, a series of médanos, and a climax of snow-capped mountains.

It is a six-hour trip from Mollendo to Arequipa, but so comfortable are the Pullman cars (built in the latter city) and so clear the air, thanks to the oil-burning locomotive, and to the freedom from alkaline dust, that we escape the chief discomfort of a trip across the desert regions of the United States. In the days before Henry Meiggs projected, financed, and equipped the railway, the journey was an arduous one. Now the traveler sits in unsullied ease and accepts the ministrations of a white-coated waiter who serves tea or beer — or anything one pleases — and thus we escape another discomfort peculiar to our own too-too-dry land of freedom.

At first the railroad follows the level beach, with the breaking surf of the sea on the right, and the mountains on the left, and comes out, a little past Mejia, on sheets of shallow, tranquil water, where cattle are standing, or browsing in the fresh grass under trees Constable might have painted. Then desert again — heather-colored, its undulating surface swept smooth, broken by occasional small oases which hold a handful of adobe cabins, of animals, of cotton, corn, cane, and figs. Miraculous as are these tiny footholds of greenery and life, it is the desert which is memorable. The dimpled and fluted sand sweeps up into the mountains, defined by valleys, purple between violet clefts. In the lengthening light the mountains become faint coral, parting to reveal a jade-green slip of low table-land. Miles away and far below is the ocean, first on this side and then on that of our winding ascent.

At Cachendo we see the Andes rising abruptly from the waterless waste — their royal heads white with snow — their powerful dark flanks streaked with it. This is our first unobstructed view of El Misti — superb and solitary — with Charchani on its left and Pichu Pichu on its right, twenty thousand feet above the ocean we have left.

We are running across white sea sand now — sand bordering 'a shore that ship has never seen.' Up from the sand through rocky chasms, with dusty cacti struggling from shallow ledges and pockets in the side, and again into table-land, brown and level as a ploughed and harrowed field, and extending for miles and miles, like a strip of Kansas thirty-five hundred feet up in the air. But, alas, this tawny soil has not the fertility of Kansas. Its plough

and harrow have been the wind, and its waiting furrows are to be forever sterile. The mountains survey this vast plain, immobile. Their grandeur is beyond the camera's lens — beyond the artist's brush. We feel a little breathless as we ride and ride, and the mountains never grow nearer, never grow less. Is it the altitude that makes us breathe quickly, or is it something like awe?

And now, passing La Joya, we catch a glimpse far away of what looks like a crowd of gray igloos, very low, and almost uniform in size and shape. We strain our eyes. Those rounded roofs — artificial on this untouched plain — baffle us. But as we penetrate into the Islay Desert we come nearer them, and behold, each igloo is a symmetrical crescent of sand, its back corrugated like the shell of an armadillo, its front as sharply excavated as if poured from concrete. These are the médanos, unique to this spot — of varying size but of identical formation. Each one has its back to the wind, its hollowed crescent to leeward, and slowly, irresistibly it moves across the desert, with such regularity that one has only to look back half a mile to see precisely where each dune was fifty years ago. No one has yet entirely explained the médanos. It is apparent that the wind, blowing always from the same direction, heaps up the lighter, ash-like sand, leaving the coarser, brownish lava. The wind continually drives the sand up on the convex side, and it, as continually, drifts down on the concave side thus forming a geometrical, perfect crescent, moving forty to sixty feet a year, inexorably onward, across the heavier, unmoving sand. It is an extraordinary

phenomenon, and one not met elsewhere on any continent.

There is another sight in this desert, this one man-made. Parallel with the railway tracks, across the sand and against the cliffs, there runs for the hundred and seven miles from Mollendo to Arequipa an eight-inch water pipe, supplying water not only to the stations and locomotives, but to the former town from the latter, seven thousand feet above it.

And now the Andes redden into rich copper, with frosty etchings on their sides. The nearer ranges flush to rose, streaked with verdigris, and the médanos are apple-green. The sky is suffused with sunset tints, as the Rio Chile glistens through its cañon to the Camana Valley. The heavier colors sink into the chasms. The mountains are nearly twenty thousand feet high and the médanos are ten feet high. But they are both the same to the darkness which settles down upon them, folding its pinions over them all.

CHAPTER VI

AREQUIPA: A CITY OF GOLD AGAINST MOUNTAINS OF SILVER

So fashionable is it in the United States to know nothing whatever of South America, that few people have ever heard of Arequipa. Astronomers know that for many years the Harvard Observatory was situated at the foot of El Misti, because of the exceptional visibility of the stars in this region. Historians and readers of travel books associate it vaguely with colonial Spain, and picture it as a frigid, priest-possessed place, with a grim church on every corner, and a barred monastery and convent in between. And the prospective traveler reads in his schedule that he had best wait over in Arequipa a few days to become somewhat acclimated to a high altitude before proceeding to the still higher ones of Cuzco and La Paz. The combination of such religious, scientific, and topographical loftiness is not alluring. The stranger approaches Arequipa gingerly, rather expecting, like poor Guinevere, to be somewhat oppressed by 'this pure severity of perfect light.' And behold! Instead of finding himself impaled upon a shivering peak of the Andes, he finds himself bathed in vibrant sunshine. Instead of being immured in chill church-lined streets, he is gayly flung into a brightly colored, briskly moving city where flowers bloom all winter, and an occasional morning frost only intensifies their fragrance. A golden city — a city of perpetual and

glorious sunshine. The ecclesiastical atmosphere has resolved itself into the cheerful clangor of bells. The observatory is no longer here, but in South Africa, where the heavens were reputed to be more liberal with their favors. And what is a few-thousand-mile-removal of telescopes and charts to astronomers who reckon space in light years?

So now the layman and the non-cleric may enjoy Arequipa unembarrassed, admitting that it is neither science nor church history that attracts them, but a climate where it never rains except three months in the year, and then only in the afternoon, invariably clearing off into a brilliant absolution that dries the air and lightens the heart. The other nine months it is literally laved, flooded, in sunshine, with a yearly temperature of seventy-five to eight at noon in the shade and a sharp drop at sundown to forty or fifty. The Incas, who were unerring in selecting healthful locations, early chose Arequipa because of its climate. The Spaniards, taking it over, made it not only a spiritual but temporal point of vantage. For years it has been the principal city of southern Peru, a wool center and a distributing market for the sierra and pampa. And now it looks as if it were to be pounced upon by a third discoverer — the tourist and the seeker after the perfect climate.

For as travelers become more adventurous, and dare to forsake the well-worn paths to Switzerland, they are learning that from Arequipa one looks out on snowy mountains rising twenty thousand feet into the bluest of skies — mountains higher than Popocatepetl, which our school geographies used to tell us was the highest in the world;

and so symmetrically moulded as to ravish the eye of the weak-kneed and tempt the foot of the climber. For between the two serrated ranges of Charchani and Pichu Pichu rises in a perfect and solitary cone, with just enough snow to emphasize its summit and define its sides, El Misti, the beloved and characteristic feature of the whole countryside.

And since there are mineral springs and medicinal hot waters at various agreeable and near-by spots, some day gouty gentlemen from Seattle will be flying down to take the baths at Tingo or at Jesus, and hypochondriacal ladies who are tired of Baden will be sipping the waters of Yura — pleasures known at present to the favored few who happen to live in or be passing through Arequipa.

There are 'sights' enough to occupy the not too-voracious transient. The cathedral — not very old, as it was only built in 1749 — is quite a miracle of good taste. Unlike the usual elaborate structure, it is classical in its two-storied simplicity. Built of sillar, a volcanic stone, it extends the whole three hundred feet of one side of the Plaza. Its long flat roof has no dome, but finishes in two towers, and at each end great arches connect the whole building with the Plaza. The other three sides of the Plaza are framed by arcades — two-storied buildings of perfect uniformity setting a keynote for the city of balance and dignity.

Arequipa is the wool center for all this region, and there are, besides, rows of shops selling silver from Cuzco and furs from La Paz. There are factories where chocolates are made with cacao from the Cuzco district: cotton and

flour and biscuit mills: tanneries, foundries, and the car-building plant of the Southern Railway of Peru. There are narrow streets graced by bridges where they cross the Chile River, and lined with pink and blue and yellow adobe houses of the poor, more sightly than savory just at present, although those benefactors of the human race — the sanitary engineer and the plumber and the sewer-digger — are already laying prophylactic hands upon the cobbled alleys with their age-old open drains. There are wider streets with handsome and more splendid churches, where fine doorways and carved balconies, and girls and women with mantillas over their heads, awake an echo of Colonial Spain.

Beyond the city is the pretty cultivated country, with rows of eucalyptus marking the boundaries of fields: with gray-roofed adobe houses, looking for all the world like wasps' nests — although some of them have fancifully scalloped eaves, thereby changing the simile to pie crust.

Up on the sandy plain near the race track five priests in black gowns are walking single file, like cranes across the sand. They are bound for the white church at the top of the hill, that looks down upon its wide staircase of exquisitely kept terraces. But their progress is interrupted. They stop. They look up at the sky. The bi-weekly airplane is coming to its landing-field, having left Lima five hours and half before. A group of llamas pause and lift delicate nostrils. El Misti, who has surveyed the passing of so many civilizations, so many countless generations of men upon this golden plain, maintains its benignant, its

LLAMAS AND EL MISTI

inscrutable composure. Is this the end of Arequipa, star of the Inca Empire, stronghold of ecclesiastical Spain? To be a landing-station for the airplane service? Is this the end — or the beginning?

CHAPTER VII

AREQUIPA TO JULIACA: A PHANTASY IN MOONLIGHT

The compartment train which carries you by night from Arequipa to Juliaca has a window at one end, and this window is like one of those mystical apertures that George Macdonald, wizard of our childhood, loved to place in his fairy stories. Is it a door, or a window, or a mirror? Do we pass through it, corporeally or astrally, or do we merely look through it, at an enchanted world? Or are the images therein reflections of reality?

For the scene through which we are slowly moving and slowly ascending is wrought of silver. The plains over which we are drawn are of silver shadowed with lavender. The mountains over which we are lifted are of white silver. The stars are enormous and glittering in a sky of blue and burnished metal. The moon is not crescent-shaped, as in our northern sky, but hangs like a hammock of spun silver in a universe of diffused radiance.

Over these high Andes, across which our puffing train will labor all night long, once sped fleet figures — couriers blowing on shells to announce their arrival, carrying fresh fish from the sea up to Cuzco, four hundred miles away, for the table of the Inca. Their roads were straight, the suspension bridges that they crossed swung perilously over the rivers below, and every four and a half miles the messenger reached a station where he handed his precious

package to the next runner, and the fish reached Cuzco in less time than we shall take. All was organized with exact efficiency in the Kingdom of the Incas.

Is it a mirror, or is it a window — that square of glass at the end of our compartment? It is a window revealing white Andean peaks, growing higher and higher as we proceed into the cold bright night. It is a mirror reflecting crag and spring, curve and valley that, a thousand years ago, were landmarks significant and dear to that populous and happy race which dwelt among them.

We are approaching the heart of an empire that was wrecked and obliterated four centuries ago: only in our imaginations can it be reconstructed now, but the clear-cut and colossal setting of that empire still remains as it was then — hammered out of gleaming silver, beneath silver stars.

CHAPTER VIII

JULIACA TO CUZCO: PASTORAL PERU

The human beings who live in any agricultural region are not the only, or, necessarily, its most interesting inhabitants. Certain it is, that in that two-hundred-mile valley which lies between Juliaca and Cuzco, sheltered by Andean Cordilleras and watered by the Vilcanota River, the many four-footed animals one sees are much more pleasing to the eye than the two-footed ones.

It might be reasonably debated if the former were not also more valuable than the latter, both to this present world where worth is calculated in labor and raw material, and to the world to come, where meekness, we are told, shall inherit greatly. There can be no debate that the llamas and the sheep, the cows and the donkeys, the goats and the alpacas and all the rest of that browsing throng are infinitely cleaner than their Indian masters and mistresses. For the covering of the beasts is self-renewing, and they frequently wade the streams and swim the fords, while their human companions never once let water touch their bodies from the day they are born, and their clothes are not removed until they drop off in disintegrating shreds.

It takes half a day to make the steady ascent from Juliaca, lying at twelve thousand five hundred and fifty-one feet, to La Raya, sixteen hundred feet higher and eighty-two miles to the north. At the high point of La

Raya the river dramatically divides — one half flowing back toward the Pacific and the other half toward the Amazon and the Atlantic. No wonder the aborigines venerated this boundary, and forbade all conflict on the land adjoining! From La Raya to Cuzco is another half-day and a drop to eleven thousand two hundred feet. And during these twelve hours the whole pastoral history of Peru passes before our eyes.

For the well-watered and fertile valley is a panorama of flocks and herds grazing over unfenced pampas, while an Indian shepherdess in a red skirt and a hat like a pancake, her distaff in her hand and her baby on her back, keeps them from straying by means of a sling and small, well-directed stones. Or a brown-skinned goatherd, in vivid, ragged poncho, squats upon a rise of ground and pipes upon his flute as he watches over them. For human labor is cheaper than fences in pastoral Peru.

Of course, it is the llamas which first catch our unaccustomed eye, with their long necks and delicate alert heads and ears. As a white sail is a rightful part of a seascape or a glinting automobile of a modern city street, so these graceful, high-stepping creatures, indigenous to and only existing in these high altitudes, pattern themselves unforgettably against the Peruvian pampas. Although it prefers the wet regions of the Andes, the docile llama can, like its big cousin the camel, travel for a long time without water. It finds its food as it pursues its leisurely course: its own thick pad of wool serves as a pack saddle: it requires no shoeing and no shelter, and whenever possible obligingly deposits its dung in the same place, thus

furnishing man with the only fuel obtainable in many treeless regions. Its flesh provides charqui, its hair clothing, and its back — or more exactly, the back of the male — transportation of burdens. To be sure, the llama has its limitations. It refuses to carry more than a hundred pounds, and if more is laid upon it, it will lie down until the pack is lifted. And it is a slow creature, grazing as it goes, and has a disconcerting habit of spitting accurately — and a very vile-smelling spit, too, of semi-digested cud — to show resentment. But there is small occasion for resentment in its placid life. The Indian treats these sensitive creatures gently, guiding them by soft whispering sounds and decorating them with streamers of bright-colored silk or wool tied through holes punched in their ears. At night he slips a noose over their long necks, half a dozen of them together, as one would tie up a bunch of carrots. So unwilling are they to lower their heads that they stand thus tethered for hours, although if they merely stretched down the noose would slip off. The coarse wool of the llama — white, brown, and black — is used for common weaving, the fiber of the alpaca being reserved for better grades of cloth.

Like the llama, the alpaca is one of the few domesticated animals the Spaniards found in Peru. Like the llama, it only thrives in the thin pure air of extreme altitude, and like the llama, its natural food is 'ichu,' the fine pointed grass of the Northern Cordillera. The alpaca is the shorter and smaller of the two animals, and although never used as a beast of burden, is more valuable commercially, on account of its lustrous, fine, and heavy hair. Its various

colors range from white to blue-gray: from fawn and orange to dark brown: and these colors are not only pleasing but permanent, withstanding light and the processes of milling and finishing. Alpaca retains heat better than wool, and since it has been submitted to the severe climatic conditions of hot days and freezing nights, it is peculiarly adapted to aviation fabrics. The stiff, shiny material commonly called alpaca in commerce is not alpaca at all, but mohair — a confusion of terms that has done much harm to the true alpaca, which is soft and flexible.

The most valuable hair-bearing animal of Peru, however, is neither the llama nor the alpaca, but the vicuña, and since this has never been domesticated it is not so often seen from the train window. It is like an antelope in shape, of light reddish brown, shading to light fawn, and its hair is more precious than the down of the Canadian beaver or the fleece of the Syrian goat. Its breastplate of longer hair is reminiscent of the double coat which it probably possessed at one time. It was from the vicuña that the garments of the Incas were woven by the Virgins in the Temple of the Sun, and under the Incas the animals were protected. But by the beginning of the nineteenth century a quarter of a million were being slaughtered annually. Now the Government has forbidden its being killed or hunted, and it is said to be increasing, although the number of vicuña rugs that still find their way into the trunks of travelers might seem to indicate otherwise.

During the spring and summer seasons the pampas are green, and then all the animals may feast. But in the winter — which is our summer — the 'grama' or grass

becomes a brown standing hay, which is very nutritious. The sheep are pastured on the best places — the llamas and alpacas can find substance where sheep cannot. The donkey, his back raw from badly packed loads, humbly nibbles at dried straw and apparently bare earth, while up on the mountain sides the goats find delight in gravel and cactus.

Everywhere the animals present pictures of unceasing industry. Down on the plain by the river three or four oxen yoked together are treading out the wheat as they did in the days of Pharaoh. The cows and the ewes, the mares and the sows are caring for their bleating or their squealing young. The horse bears his master to the village, and the donkey bears mistress and children and half the produce of the estancia after him.

With the exception of the Andean camels — the llama, the vicuña, the alpaca, and the huanaco — none of these animals is indigenous to Peru. The Spaniards brought the first horses, and the Indians were terrified, thinking rider and steed were one strange animal. Even when they learned that they had made a mistake in this particular, they so venerated the horse that when they found one left on the Island of Titicaca they reverently fed it on birds and flowers, on which menu it inconsiderately died. Cattle and poultry, pigs and sheep were also introduced by the Spaniards, and Garcilasso de la Vega tells of seeing the first bullocks put to the plough near Cuzco in 1550.

Although these animals soon became indispensable to the Indians, they also soon degenerated. The native Peruvian ewe is to-day a scrawny creature, with no wool

whatever on her belly, and producing about a pound and a quarter of kempy fleece, which is hacked from her back every two years by the aid of a knife or a bit of broken glass. The native cattle are bony and give little milk. The poultry are chiefly distinguished by their midnight cackling and crowing, and the pigs are scavengers.

It was this disastrous state of affairs that in 1921 brought about the establishment of the Granja Modelo, or Model Farm, with Government subsidy, and under the direction of Colonel R. J. Stordy, who had had extended experience in East Africa. Now as we draw into Chiquibambilla, we see first the stout wire fences, and then the substantial gates and trim walls and corrales of this most valuable Government station.

Granja Modelo is chiefly concerned with sheep — it has fourteen thousand on its eighteen thousand acres, for this high and healthy region is one of the richest and best sheep-rearing tracts in the world. There are no droughts as in Australia: no plagues as in Africa. There are no vegetable impurities to damage the wool: no wind to drive dust and sand into it. Grease and dirt are minimized, and the pure wool averages sixty-five to seventy per cent. The native grasses are so nutritious that the great ideal of all sheep-raisers is being approached — the development of an animal valuable both for mutton and for wool. There are few diseases in this pure air. Tuberculosis does not exist, and wool grown in such high altitude attains exceptional length and fineness.

To be sure, the altitude presents difficulties of acclimatization for imported pure-bred horses and cattle. But

one by one these difficulties are being overcome. Splendid cross-bred sheep are being produced which at the age of six months outweigh their mothers (the average live weight of a native sheep is forty-five pounds). Instead of the former kempy wool clip of a pound and a quarter, these cross breeds, having been properly dipped and clipped, produce five and a half pounds of wool entirely free from kemp. The Indian is relinquishing his bit of glass and becoming expert with shears. Some of them can shear eighty sheep in a day, and the farmers send their Indian shepherds to Granja Modelo for instruction in this art.

The wool is baled with modern machinery in an absolutely professional manner, and has already made its favorable début in the wool market of the world, in London.

The Indian is a natural herdsman, with an inherited intelligence in regard to livestock. The degeneration of his flocks and cattle, inbred from 1532, was due to his ignorance, and his ignorance was largely due to the fact that the landowner of the hacienda did not live there, but in Arequipa or Lima. Now, with this graphic example of progressive methods before them, they are learning the secrets of breeding, of selection, of dipping and shearing; of medicinal measures; of preparing silos and ensilage; the necessity for paddocks and rotation grazing. They are extremely adept in the classifying of wool, as their senses of touch, sight, and smell are keen, and they are ready to improve their own herds by the elimination of native rams and the use of the pure-blooded stock or good cross-breed rams from the Granja Modelo. The Granja Modelo

has experimented with many different kinds of imported rams and ewes — Southdown, Shropshire, Suffolk, Rambouillet, Merinos. One of the most successful crosses has proved to be the New Zealand Corriedale ram with the native ewe.

Beside the Granja Modelo, Colonel Stordy is directing an experimental mixed farm at Kcara, near Cuzco. Here the Indians are being taught modern methods of cultivating crops as well as handling livestock. Progressive dairy processes, cleanly slaughtering, and proper dressing of carcasses, the use of threshing, reaping and binding machines. At Kcara they can win certificates as majordomos of farms. And not only the animals but the Indians are being properly housed. Sanitary dwellings are erected, with proper bathing facilities, and plots of ground where they may cultivate their own crops. Prizes will be given for the cleanest compound, and gradually a model Indian village is developing.

Chiquibambilla is not in precisely the right altitude for the best work with the camel family. But Colonel Stordy has just been offered a place where valuable experiments with these animals will be carried on. The alpaca and the vicuña have already been crossed, producing a paco-vicuña, which is larger than the vicuña, with hair finer and longer than the alpaca. The llama has also been crossed with both the alpaca and the huanaco, but the results of this crossing, in fertility in the offspring, are not yet determined. A disease which has formerly carried off many of the young camels — sometimes fifty to eighty per cent in a season — is being studied and combated.

The Granja Modelo is one of the most inspiring sights in the whole of southern Peru, and well deserves the permanent place which has been given it at the Seville Exposition. It means that this strange country, with its dry healthy soil and clear streams: with its hot days and cold nights and the pure breath of its mountain ranges, is coming into the full richness of agricultural life. There is a world market for Peruvian wools: Peru has the monopoly of the valuable alpaca, and there is always use for the sheep that are off-color or do not come up to specifications of carcass or wool, in chalona, or frozen mutton.

Although the train leaves Chiquibambilla behind, yet the effects of its work are traceable throughout the whole Sierra, in better live stock, and more intelligent and ambitious herdsmen and farmers.

Neither is the Granja Modelo the only sign of progress in this region. At Chechuyoc a factory, with electric power, is turning out woolen cloth of such excellence that it is readily finding foreign markets. And in the shadow of the factory, watching the passing train, the Indian women stand, their babies on their backs, twirling the woolen thread in one hand, and their home-made spindles in the other. Women here, as elsewhere, are the conservatives.

Indians... terraces... animals... adobe houses... for hours and hours. At Combapata the houses begin to display tile instead of thatched roofs, and attain to two stories, with painted wooden balconies adorning their tinted façades. The whole scene becomes more populated, more cultivated. And, since we have left the wire-fenced meadows of Granja Modelo, everywhere the sheep, not

separated from the goats, nor the donkeys from the llamas for that matter, nor the alpacas from the pigs — browse along the river's edge, and look up mildly at the passing train.

Neither are all the animals in the fields. At the door of every hut is a collection of bird cages, in which the feathered tenants flutter and chirp. Every house has a litter of puppies, and the ubiquitous dog barks at the train and races beside it just as profitlessly as he does the world over. A puppy clasped in the arms of a child or a woman is a frequent sight, and the by no means bad-looking grown dogs are cleaner and better fed than the ragged families to which, with characteristic lack of discrimination, they attach themselves.

The fastidious cat is not so often encountered. Fires are few and meager, and the nights are cold. There are no soft cushions or dainty viands for such aristocratic creatures. The few ill-advised felines who have found themselves in this uncongenial air wear a sour expression upon their sharp faces, and their sinuous curves have been thinned to emaciation.

In the corner of every kitchen of the poorer folk a family of guinea pigs gobble at table scraps, preparing for the day when they, too, shall have their brief hour upon the family board, conclude both début and final appearance and return to the kitchen a handful of well-gnawed bones. The rooster and the hen are here, and plenty of less respectable crawling creatures, description of which we omit.

The long day's trip from Juliaca to Cuzco draws to a close. At Aguas Calientes rivulets of steaming hot water

run beside the track to be cooled by others of icy coldness pouring down the cañon. Here, it appears, is one place in Peru where the inhabitants may have plenty of both hot and cold water.

La Raya is the summit of the route, and after passing this we commence the descent into the wheat and grain region of Cuzco. As the river becomes wider, and the valley becomes narrower and greener, night gathers apace. Sheep and goats and cows are already gathered into the corrales which adjoin the low-roofed houses. A line of llamas, their small proud heads erect upon their swaying necks, tended by a bright ragged figure, step slowly along the road by the river....

CHAPTER IX

CUZCO, THE INCA CAPITAL

A MODERN railway station and modern railway hotel, absolutely clean, with excellent food, plenty of baths, hot water in every room, everything as convenient and utilitarian as a filing cabinet; a well-paved double avenue with trolley tracks on one side and an alameda of green down the center; new stucco and adobe villas with lace curtains and garages — is this Cuzco? Yes, this is Cuzco.

But this present day and Peruvian Cuzco does not extend very far nor thrust its foundations very deep. In ten minutes you have passed it all and are walking — very slowly, for the thin air does not permit the unacclimated to hurry — down narrow cobbled streets, past patios half glimpsed through tremendous portals, across plazas large or tiny, framed by two-storied buildings with balconies and tiled roofs, and shadowed by the Renaissance façades of churches, chapels, and monasteries of infinite number. A city of another age, settling, with a sigh, into the mellow atmosphere. Is this Cuzco? Yes, this is the Cuzco of Colonial Spain.

This is the city whose altars of gold and silver, whose pulpits of carved cedar and caskets of jewels and white-robed and black-robed priests are still maintained in piety. This is the city Pizarro built to exalt the power of a nation too proud and powerful, and over whose stone doorways he and Almagro, Valdivia, Toledo, and the rest stuccoed their

arms in high relief. This is the cathedral which Fray Valverde planned — that iron-hearted and subtle-speaking priest who absolved all treachery, all cruelty, all blood lust and plundering, if undertaken for the aggrandizement of the King and the glory of the Lord. Yes, this is Cuzco, and you will not find, even in Spain itself, churches of more frequency and magnificence, courts and steps, balconies and grilled windows of more provocative grace.

But as you wander up and down closely built alleys whose vistas end in an abrupt hillside and a file of eucalyptus, you will find yourself, whatever direction you take, in narrow thoroughfares unlike any you have ever seen before. On either side of you are walls made of blocks of stone — lead gray and leaden heavy, each course slightly smaller than the one below it, sloping with perfect inclination from bottom to the top. Occasionally doorways, narrower at the top than at the bottom, and like the walls, with noticeable backward slant, pierce the stone. The monotony of the cyclopean walls — those composed not of regular but irregular shape and varying sizes, but accurately fitted together — is frequently broken by the introduction of countersunk niches, something like the 'blind' windows used by present day architects to relieve blank exteriors. Often the somber gigantic construction stops abruptly to give way to a stretch of roughly assembled modern rock and mortar, or to be lost under whitewash, or topped by an adobe building. These massive melancholy stones, cut and fitted as regularly as cubes of cheese which have been divided by a knife and then pressed together to form a solid whole — these ponderous particles of rock, and the Que-

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chua names which accompany them — onomatopoetic names, K'Eswathe Street, where straw rope was made; K'Acho Chuño, the street where frozen potatoes were sold; Wainapata, where youth lives — this is all that is left of the ancient Cuzco, the Cuzco of the Incas.

What was this city of the Incas? Selected, tradition says, by Ccapac Manco and Mama Ocllo with a gold divining-rod, it was erected at a date we cannot reckon and built in a manner we cannot conjecture, since the builders had neither steel nor iron instruments. It had houses for two hundred thousand people and palaces for the Inca who was chief and king and benevolent despot. It had convents where virgins were kept and reverenced. It had irrigated fields bearing enough food for every one. The storehouses were well filled in case of famine: the fortresses superbly placed and defended. A cornice of gold more than a yard wide encircled the great temple like a crown. The slightly flattened circular tower was shaped of selected stones, with the inner walls, Garcilasso tells us, 'covered from roof to floor with plates of gold.' He goes on to say: 'In the side where we should look for the high altar they placed a figure of the Sun made of a plate of gold of a double thickness than that of the other plates which covered the walls. The figure was made with a circular face and rays of fire issuing from it, all of one piece just as the Sun is represented by painters. It was so large as to occupy the whole of one side of the temple from one wall to the other.' Around the cloister were five other great halls: one dedicated to the Moon, with the walls plated with silver, and with a silver image like a woman's face: another to Venus and the seven

Pleiades and the stars 'who are handmaidens to the Moon, since they walk with her at night.' Another was dedicated to Thunder, Lightning, and Thunderbolts, and a fourth, prismatically colored, to the rainbow. The fifth and last apartment was for the high priest, and this was also plated with gold from floor to ceiling.

The people who erected this temple lived in order and health, under the most successful communism the world has ever seen. Their land was divided into three portions — one portion for the Inca, one for the Sun, and one for the people, with seventy square meters for every boy and thirty-five for every girl. The live stock and implements were similarly apportioned and the land was ploughed, planted, and the crops gathered in strict rotation. First the fields of the Sun were cultivated, and then the land of the aged, the sick, widows, and orphans was tended: then the lands of the people, neighbors assisting one another: and last of all the lands of the Inca, with songs of praise and joy, because this was the service of their King. To every living soul was given his task, according to his physical and mental capacities. He was prevented from overwork, prohibited from idleness, cared for in illness and old age. Children were taken by the Government when they were five, and trained to the profession where they were most needed. There was no hunger, no crime in the whole empire.

The Inca held his kingly office over the docile, industrious, and contented mass, not only through his royal blood, but through his wisdom and kindness in caring for and guiding his subjects, his bravery in war, and his statesman-

ship at home. Although he set an example to his subjects by following every law which he promulgated (astonishing idea to our modern lawmakers!) he lived, as became his rank, in luxury. In his garden were rows of corn moulded from pure gold with leaves of pure silver, and a tassel of spun silver, as fine as silk, moving in the air. Llamas and alpacas, life-sized and cunningly fashioned from the same metal, stood upon his lawns, as they did in the courts of the Temple of the Sun.

The art of the Inca Kingdom, like its organization, was one of the most marvelous in the history of man. How a people, totally isolated from every other civilization, worked out one of their own of such efficiency and order, is still inexplicable. They understood the measurement of the year, solstices and eclipses of the sun and the moon. They had their systems of music, geometry, and mathematics, calculating the latter by means of knotted threads, called the quipu. Prescott tells it all in his 'Conquest of Peru,' and although there has been much material discovered since he wrote, and although many writers have attempted to use it, the subject has never had more fascinating recording. He describes in detail the religious, political, and social organization. He tells how those whom the Inca conquered in war he treated kindly, so as to win their affection and allegiance. Some of them he brought to live within his own immediate kingdom, so as to become amalgamated, and in their kingdoms he placed certain of his own people to spread Incaic ways and principles. Even in domestic details, supervision was not lacking. Women dressed modestly, marriage laws were strictly regulated

and enforced, although in certain provinces, confesses Garcilasso, 'the most dissolute were more certain of marriage than those who were faithful. At all events, the abandoned girls were held to be more lusty, while of the modest it was said that they had no desire because they were torpid.' So some discrepancies cropped out, apparently, even under the Incas!

The territory under cultivation and irrigation was probably three times greater than that to-day. We can still trace the reservoirs and irrigation canals and the old road between Lake Titicaca and Quito, for the empire extended as far as the present day Quito on the north, and to Santiago de Chile on the south. An empire of so many millions of people, extending for twelve hundred linear miles and enduring for at least six centuries, has left many traces behind, so that an archæologist can go out almost any fine morning and discover a ruined city.

Our information concerning Cuzco has always been scanty, and now that the chatty and detailed history of dear garrulous Garcilasso de la Vega, born in 1540 to an Inca princess and a Spanish nobleman, is being somewhat impugned for accuracy, we know even less than we used to! But true or not, certain stories related by Garcilasso are likely to persist — as how, when travelers met upon the road, the one who was going to Cuzco was forced to make obeisance to the one who was coming from there, for the latter had seen with his eyes the sacred city and was, in a manner, ennobled. And how, since it was the custom of the Indians to celebrate their ceremonial dances in the great square, forming themselves into concentric circles

with woven paces and weaving hands, the Inca Huayna Ccapac had a golden chain made to beautify the observance. This chain was twice the length and breadth of the square, or about two thousand feet long, and every link was as thick as a man's thumb. As the Indians held it, they waved their hands over and under it. When the Spaniards came the dancers hid it — some say in Lake Urcos, where many lives have been lost diving for it.

The plaza around which the Indians danced was destined to become a place of horror. The Spaniards used it as a tribunal, and even as late as 1571 the boy Inca Tupac Amaru was brought here for execution, having first been converted and baptized with the name of Philip. As the executioner lifted his axe such a great cry of grief and horror rose from the assembled crowd, shocked inexpressibly by the approaching blasphemy, that the executioner paused a moment involuntarily. Then Tupac himself raised his hand to signify that he was ready, and the axe descended. But that night the Spaniards looking out from the palace windows saw countless hosts of Indians still kneeling before the severed head of the King.

Into this same plaza arrived from the sky no less a visitor than Saint James himself, on a white charger, with his lance in its rest, and turned the tide of battle in favor of the Spaniards. Unbelievers need only look at the sculpture over the door of the Chapel of Santiago to authenticate this statement.

A little way out from the town, on a headland rising between the two rivulets of Huatenay and Rodadero, is outlined the fortress of Sacsahuaman — a fortress of such

magnitude and built with such knowledge of military engineering that it is properly called the most tremendous achievement of primitive man on the Western Hemisphere. It can only be compared to the Pyramids and Stonehenge. Stones, some of them measuring thirty feet by eighteen, brought from the limestone cliffs three quarters of a mile away — along well-graded roads, still traceable — are placed side by side, and so beveled at the edges and joined without mortar of any kind that they fit as closely as a pile of sofa pillows pressed together. The builders had neither iron nor steel instruments, did not know the use of the crane or the pulley, nor even possess draught animals — yet the joints of their stonework are nevertheless of a precision unequaled in any ancient European art. It is impossible to say whether the absolute uniformity of the stones which line the streets in the city below or the treatment of these huge irregular blocks is more marvelous.

The Indians have a story that the early builders rubbed the juice of a certain plant on the edges of the stones and so softened them that they could cut and fit them like putty. Another theory is that they made copper moulds and fitted each stone before laying it. Squier, who made a most detailed study of the whole subject, says: 'Although there is no direct evidence remaining in the quarry as to the manner in which the stones were dressed after being extracted from their beds, yet it seems pretty clear that most of them were picked or hammered into shape with a pointed instrument or a hammer before passing under the chisel. Of the manner in which the stones were separated from the natural rock there are here, as in other places, abundant il-

lustrations. Excavations were made, where possible, under the masses of rock, so as to leave some portions of them impending. A groove was then cut in the upper surface on the line of desired fracture, in which oblong holes were worked to a considerable depth, precisely in the manner now practiced. The presumption is strong that wedges of dry wood were driven into these holes, and water turned into the groove. The swelling of the wood would evenly split off the block. This device is probably almost as ancient as the art of stone-cutting itself. I found some disks of hard stone in this quarry, with holes through their center, as if for the reception of handles, which may have been used in rough-dressing or hammering the stones into shape.'

However this may be, the fortress of Sacsahuaman is constructed with three gigantic walls, each a third of a mile long, with its separate well-defined entrance, and each built in salients and reëntrant angles, or zigzag, for better defense. The lower wall has, at the apex of each salient, a huge boulder at least twenty-five feet high and ten or twelve feet thick.

Across the open plain which the fortress faces, and which may have been used as a parade ground, there rises another hill of amphibolic rock. On it is the famous planed and burnished rock which is called the Throne of the Inca, as the regular cutting of seats and steps and its exalted position suggest that purpose.

Above the exquisitely cut and formed Throne of the Inca there has been conspicuously erected a poorly hewn stone cross, painted a dismal black. The cross and the

pedestal on which it stands are badly proportioned, badly cut and untidily cemented with coarse mortar. Unfortunately they are strong, for they are the second to be built upon this spot, the Indians of Cuzco having destroyed the first. When we think of what has been done in the name of Christianity in the degrading of an enlightened and happy nation into beasts of burden, to forcibly flaunt the Christian symbol above the ruins of their once mighty empire might be considered debatable taste.

The region is an arena for extraordinary feats and inexplicable monuments. Entire hills of solid rock are carved into fantastic jumbles of seats and niches, reservoirs, steps and tables, for no other reason that we can ascertain beyond the sheer delight of execution. In the 'Labyrinth' natural fissures have been so enlarged, such corridors cut through, and such apartments contrived that the Prefect of Cuzco finally had certain passages walled up, to obviate accidents to those who got lost in the mazes and starved to death.

Inca Manco Ccapac, the founder of Cuzco, built his palace halfway up the slope of Sacsahuaman, and some fragments of it — a doorway and a window and a bit of wall — can still be seen on the site now occupied by the church and plaza of San Cristobal — a site dominating the whole valley. And from here to-day we may look down on the pink and lavender tiled roofs, the velvet hills and the blue-green of the young eucalyptus and the snowy mountains. Across the quiet pastures men are carrying sheaves of grass on their backs. We hear the mellow note of the great golden Maria Angola and many lesser bells, the

patter of llama and donkey hoofs, and never the sound of a wheel. It is a charming vista, but not as impressive as the one which must have existed before there were any tiled roofs, or golden bells in Peru — but only stone palaces for the Inca and stone houses for his happy people, and fields and storehouses filled to overflowing for all. It was that kingdom, that civilization, which the Spaniards overthrew in a frenzy of ignorant elation, and obliterated as far as possible.

After winning their way into Cuzco by deeds of treachery, glaring even in the long melancholy history of man's dealing with man, they tortured and murdered all the leading nobles so as to break both the spirit and organization of the masses, and then set systematically to work to wreck the city. Even the closely carved astronomical pillars they destroyed as idolatrous, or if they could not destroy they defaced them. They did these things not only to procure as much gold and silver as possible, but to tear from the hearts and the eyes of the aborigines all symbols and comforts of their patriotism and religion. And on those ruined walls they set their own churches and monasteries and palaces. And on those desolated lives they forced their unintelligible theology of Rome. They added to this labors and burdens so dreadful that their wretched victims died by the hundreds and thousands, and those who died were the fortunate ones. Perhaps in the new day that is dawning Peru will find the way to rehabilitate the stunned and demoralized descendants of that once happy people. But it is impossible to look at them to-day without wondering if it had not been better if all had been put to the sword, and this present generation had never been born.

Only one of the great Inca erections escaped total destruction and that was the Temple of the Sun. Its impregnable foundation, its smoothly rounded tower, seemed to offer an admirable base for the church and monastery of Santo Domingo which was subsequently built upon it, and which still stands, with Spanish columns above the Incaic wall.[1]

The chambers dedicated to the warm and tangible gods of the Incas have other uses now. In the niches the monks may rest their Christian missals, and in the corridors which resounded to the chant of the high priests now pace the sandaled feet of the Dominican Brothers.

It is only fair to recall here that the irrevocable injury wrought upon this nation, to the loss of the whole world, was not due to the policy of Spain, but to the avarice and brutality of the individual settlers. Such authorities as Sir Arthur Helps, Clements Markham, and Herman Merivale all emphasize the humane and benevolent laws which continually emanated from the Spanish monarchs. But Peru was far away, communication was uncertain and slow, and the rude adventurers who found themselves in possession of so much power and territory followed the ruthless and brutal example of their leader. If that leader had been of another caliber — if, for instance, it had been Francisco

[1] Squier, who was admitted as an honorary member of the brotherhood and lived with them for a week, measured, photographed, and sketched the building inside and out. He says: 'The Inca architects knew as well how to cut their stones for circular buildings as for quadrangular ones. One portion of the Temple of the Sun is circular, or, rather, the section of a flattened circle. The stones must have been cut to conform to this shape, for their sides of contact are true radii of the double circle, and the line of general inclination of the wall is perfect in every block.'

de Chaves instead of Pizarro who had first come to Peru — the story might have been a different one. We might to-day have still a Utopian Incaic Kingdom, showing our perplexed democracies the ways of prosperity and peace.

And so it is that the Cuzco of to-day is a sorrowful place for those who know its history. Although in soft color, in sagging line, in noble proportion of dome and carved beauty of cloister, of palace and patio, and above all in sky and cloud and hill it is without a rival, yet wherever one stands sad pictures press too close: too many civilizations have been overlaid one upon another. Inside the churches lie the bones of Gonzalo Pizarro, Almagro, and others of the Conquistadores. In the outer walls of churches and cathedral — recently elevated to the rank of Basilica — we recognize the smooth and uniformly cut stones which were torn from their original places to be thus utilized. The regular cubes are there, but the Spaniards could not lay the courses as the Indians had done. And neither can the present generation — either in Cuzco or anywhere else. Such stone work was a peculiar art, whose grave beauty can only be seen and studied on the terrain where it was created. It is an art that is entirely lost. All modern stonework is crude and barbarous in comparison, held together with cement or mortar, while in those days it was fitted as a cabinet maker fits fine woods. And so the Christian churches and University, the municipal buildings and the cathedral are synthetic mementoes of a beauty that has been irretrievably broken. Even the untouched fragments that remain in their original places remind us of the ruined whole.

Cuzco is old... old... Dust lies upon the straight heavy walls of the Incas, and upon the superimposed stuccoed coats-of-arms of the Conquistadores; on golden bell and pottery dish; on dim paintings of saints in Spanish lace; on withered mummies upon museum shelves, their fleshless hands pressed against their eyes as if to shut out the merciless world to which they have been returned; on Indians in ragged vivid ponchos; on priests in black cassocks; on school children in their uniforms; on llamas stepping delicately over the cobbles; on the stark walls of Sacsahuaman strewed upon the plain above...

CHAPTER X

OLLANTAYTAMBO: DOWN THE URUBAMBA CAÑON

In the days when Squier and most of the other best-known writers about Peru made their excursions and exploration, travel was no easy matter in South America. On mule-back, over icy plains and mountains, fording streams or pitching perilously above foaming rivers on swaying suspension bridges, eating chupe made of frozen potatoes, and charqui of dried llama meat — and a meager apportionment of either, sleeping in huts and caves or in the open air — these hardships were expected and endured. It took longer to get from Lima to Cuzco than from Lima to New York.

But along with the rest of the world South America and Peru have changed. The sleeping-cars are all made with compartments — none of our makeshift Pullman berths: the dining service and food better than our own. The airplane supplements the railway and the steamer, and the automobile rolls over cobbles that a wheel has never before pressed.

To-day, to get to Machu Picchu, formerly one of the most inaccessible spots in the Andes, one engages an autocarril, which is an automobile fitted with special wheels so that it can run on railroad tracks, and settles himself comfortably for the eight-hour spin, with the top up or down, as his fancy dictates, and with the privilege of stopping when and where he pleases.

The drive is a succession of gorgeous views. Precipitous granite escarpments, a thousand feet sheer, hang straight down from the sky like titanic backdrops, or fold away to reveal others of the same staggering proportions. The Urubamba River which joins the Vilcanota at Pacha, runs alongside, gently or swiftly, between green banks or tearing over stones, and here and there the verdure parts to reveal fragments of Inca stonework that all travelers in this region so soon learn to recognize and to love.

He who cannot satisfy his hunger with the five-course luncheon awaiting him at Ollantaytambo, beginning with native olives and cheese, had best never risk the country hotels and railway station restaurants in the United States. It may not be quite so heroic to thus comfortably approach what has so long been unapproachable, but whoever craves for more primitive conditions need only strike off in any other direction, for there are plenty of cities still waiting for the adventurer and the railroad. But those who want to see the Ollantaytambo of Squier, and the Machu Picchu of Bingham, may as well resign themselves to the smooth comfort of the autocarril.

The fortress of Ollantaytambo, zigzagging up the dizzying mountain side and overhanging the fertile valley below, is reached in a few minutes' walk from the railroad station. It is a confusion of niched and crenated walls, of stairways and corridors and terraces, of seats and doorways cut in the solid rock. This was the bulwark of the empire of the Incas against their enemies, the Antis, and pausing by one of the stone seats that are placed wherever the turning path opens out into an especially extended vista, one sees

precisely the advantage the holders of this citadel had against invaders. Six upright slabs of porphyry, about twelve feet high, polished and fitted together by thin strips of stone, support a terrace that looks down upon the bright valley and river, and out upon the abrupt mountains folding away and away into the distance. Here often the Inca must have stood and surveyed this vast strategic segment of his domain. Thousands upon thousands of Indians toiled over their labors of hewing and transporting these gigantic blocks. But under the equable direction of their Inca no individual was taxed beyond his strength. Each had his appointed place and part in the construction of the fortifications, and each had his adequate remuneration. Each had, also, two satisfactions denied our modern workman — the consciousness of perfect craftsmanship and the joy of reverence for his ruler.

Although travelers usually content themselves with a brief stroll around the ruins of the fortress, this was only one section of Ollantaytambo. Dwellings, tombs, prisons, watch-towers, the Horca del Hombre over which male prisoners were thrown, the Horca de Mujer where women prisoners met a similar doom, are scattered for miles along the mountain sides and tops, and on spurs above the river. Squier spent two weeks exploring Ollantaytambo and left lamenting that he had only seen a fragment of it. His lovingly minute account of this region is still the most delightful that has ever been printed.

The Inca road leading to the distant quarries where the stones were obtained may still be traced by the partly hewn blocks which have been left along its course. It is

evident that the building material was dragged along the ground to a headland, and there toppled over the edge, sliding down two thousand feet into the valley. Other blocks lie in the quarries, and still others are strewn across the bed of the river, and certain immense slabs over twenty feet long have been abandoned on the side of the mountain or at the foot. Piedra Carisada, 'tired stones,' these tremendous blocks are called, graphically enough.

Ollantaytambo is the scene of the Quechua play of Ollantay, which has been translated by Clements Markham, and is the most perfect example we have of the drama in ancient America. And the outline of the palace of Ollantay, the love-lorn chieftain, is still pointed out, standing on its terraces above the smiling valley.

Lingering among these high ruins we are conscious not of a feeling of regret for what has been lost but almost of envy. Here lived a mighty race which builded and builded perfectly. It is no more. Hostile human beings and natural calamities have wiped it from the map of living peoples. And yet it has left behind all that any race can hope to leave — testimony of its belief in perfection, and of its striving toward it.

From Ollantaytambo to Machu Picchu the scenery soars into magnificence. The valley grows deeper and darker: the mountains grow higher, with snow on their splintered tops and tropical luxuriance at their feet: the air becomes warm and fragrant. The houses of adobe and rock give place to those of bamboo, or even of corn shucks tied together to form temporary tents. The golden broom spouts upward in gigantic flowering fountains: the lantana is a

tree. And now the river begins to roar and foam between its narrowing confines. The valley is a cañon that cleaves the earth asunder, as the rearing jagged mountains cleave the sky....

The railway track stops at Machu Picchu at present, but it is being carried further to Santa Ana. Ultimately a good hotel will be built to replace the present primitive one in the railway camp. Rumor even hints a road for automobiles up the two thousand feet to the ruins, now gained by an hour and a half climb. And thus the hardships of travel in Peru recede even farther into the limbo of legend.

We need not fear that such invasion will spoil this skyey sanctuary. We could pile half the skyscrapers in New York along the road, and from the mountain where we are going to-morrow they would be no more offensive than ant-hills. It would take more than the whistle of a locomotive to drown the eternal roar of Urubamba River: and more than electric lights to dim the effulgence of the moon as it rises above the heights of Media Naranja and illumines the divine depths of the cañon below.

CHAPTER XI

MACHU PICCHU, THE WHITE GRANITE CITY OF THE ANDES

If the principal delight of travel is to lift one entirely from accustomed habits of thought, then one can do no better than to leave the Valley of Urubamba, with its dark cañon and foaming river, and journey up and up to that ridge which, stretching between the mountains of Machu Picchu and Huayna Picchu, bears the long-since-abandoned white granite city of the Incas.

It is a climb of something over an hour from the cañon bridge to the city walls two thousand feet above, and in that climb one's entire scale of values expands, and becomes exalted. For in the cañon the triangular face of the mountain Media Naranja rears blackly up into the sky, like the impossible peak in a picture book of childhood. And after we have crossed the river and wound our slow ascent first through jungle and then across the side and shoulder of Machu Picchu Mountain, Media Naranja seems below us, as the fairy tale that accompanied the picture in the book sinks into the level and light of maturer day.

A royal gateway and a royal stair lead into that city whose origin we do not know, and the cause of whose desertion we may only conjecture. Certain it is that the Spaniard never penetrated into this distant fastness of the Andes. There are no Roman Catholic churches super-

imposed upon these mighty ruins. No Spanish palaces or plazas or streets confuse its majestic integrity. It has been permitted to fall into undeformed decay, for nature alone has wrought its semi-annihilation. All the ephemeral material that went into its construction — the clay, the wood, the fabrics, the woven straw, the painted stucco, and the mighty throng who made up the population — these have disappeared. All that remains is the basic structure of white granite, and upon this structure even the most sluggish mind is stimulated to rear a picture thrilling and stupendous.

Beside the stair runs a channel, carved in stone, with baths or fountains at different levels. Down this channel, long ago, trickled water, and up and down these splendid steps trod thousands upon thousands of feet busy on errands for that august being, the Inca, who, while guiding their activities with wisdom and kindness, yet reserved for himself and his intimate family the stateliness and ceremonial, the epicureanism of noble privilege. So schooled are we to the standardization of a democracy that it is with difficulty that we can even glimpse the meaning of grandeur of living as it was understood in those days. It is only when we stand on such a spot as this, with the craggy Andes high above and below us, and the roaring river a soundless green and white thread in the cañon, and realize that this awful site was deliberately chosen as a fitting place for a chief to place his palaces and fortress, that the meaning of kingly power penetrates our minds. What veneration for his office animated a human being who could say: 'Here upon this mountain-top, guarded by un-

scalable precipices, hidden from the world by thousands of miles of abysses and peaks that are lost in cloud and snow, I shall build my appropriate kingdom. It shall be of eternal stone, cut as exquisitely as jewels are cut, and ten thousand thousand willing subjects will labor for their sustenance and my honor in the gardens terraced upon its sides.' The worthy Rotarian is stunned, indeed, when he finds himself at Machu Picchu and apprehends, however dimly, the magnificence, the idealism of such a creation!

For archæologists, and for any one who is interested in extended and specific detail of this most important of prehistoric ruins in the Western Hemisphere, there is a complete account and two hundred and fifty pictures in the 'National Geographic Magazine' for April, 1913. In 1912 Professor Hiram Bingham hacked a laborious way to this then undiscovered region, accompanied by geologists, osteologists, topographers, archæological engineers, and others. For four months the party conducted scholarly and painstaking excavation, clearing away the jungle and bringing to light the long obscured walls. To them the world owes its knowledge of Machu Picchu, and in Professor Bingham's monograph scholar and layman alike will find every fact and figure, and every pictorial angle of the place. What they will not find on any written page, or in any picture, but only on the heights of Machu Picchu itself is that overpowering sense of absolute impregnability.

There are squares and streets and stairways in Machu Picchu, all of stone. There are rounded towers of white granite of a selected grain. There are courts within courts.

There are vestiges of altars and temples built on even giddier heights, and there are terraces both for agricultural and defensive purposes, a few feet in width, and fashioned in what seems sheer wall of rock two thousand feet above the river.

The city was evidently divided into wards, each with its own entrance, its gateway with a stone lock of great ingenuity, and its religious center — sometimes this last possessing a cave below the ground, lined with cut stonework. The dwellings, which are usually a story and a half high, have gable ends. Cylindrical projecting stone blocks suggest the wooden rafters which have disappeared, as do the ring stones to which the rafters were probably lashed. While the buildings are crowded close, there remains an extensive system of communication of narrow streets and stairways — over a hundred of these latter, and some of them wrought from a single granite block.

The most carefully selected stone was used in what is called the King's Group and the Princess's Tower and the Priest's House. 'Intihuatana' means 'the place where the sun is tied,' and the sundial behind the temple tops a terraced hill. Everything about the city emphasizes that it was a place of refuge and defense; not only its position on a mountain ridge, with a river surrounding its base on three sides, but its dry moat and inner wall, fifteen to twenty feet high and made of huge boulders, some of them tons in weight. Where the natural face of the mountain is not absolutely unscalable, high steep walls were erected, and the terraces in the largest level space within the city itself were probably for agricultural use in time of siege.

It seems safe to agree with those authorities who declare that Machu Picchu was invulnerable and could never have been captured by an enemy. Professor Bingham suggests as an explanation for its desertion that the climate changed and the water gave out. He thinks there never could have been a great deal of water there, as the channels for it are so narrow. To-day there is barely enough to supply one or two families.

Impressive as all these actual evidences are, we must remember that they are only the skeleton of what was once a pulsing organism. Brilliantly colored and closely woven fabrics such as are preserved in the museum at Cuzco were once thrown upon these regal seats. Painted jars stood upon the parapets, and accented an angle in the granite stair. Beloved forms leaned out over the deep window-sills or reclined on wool-hung couches. Since wherever there are human beings there are pets, we can believe that tame animals basked in the sunlight. We know that the Incas domesticated pumas and foxes and hawks; that they 'adored monkeys for their cunning and cats for their agility.' We can still see the holes where the sacred snakes had their nests. And without a doubt birds like those we heard caroling in the woods this morning sang from their woven cages. Images and utensils of gold and silver and bronze stood in the niches, and the Inca dined on savory foods and wines, luxuriating in the most perfect climate conceivable — that of tropical sunshine, cooled by an altitude of eight thousand five hundred feet and freshened by a perpetual breeze.

We do not know what kind of roofs covered these mas-

THE HOUSE OF THE THREE WINDOWS, MACHU PICCHU

sive walls. We can be sure that it was not the casual straw under which the caretaker and his family lodge to-day. Squier tells of roofs tastefully and elaborately wrought in many colors and various textures of straw and reed, and we may assume that the architect who demanded that huge granite blocks should be cut and polished like precious stones would not rest content with unsuitable roofs and ceilings and floors. Stucco finished some of the walls, and carved stones, of which a few remain, lent further decoration. The tremendous conception of the whole, and the minutest detail of every part, point to a luxurious and artistic perfection such as is only possible in a civilization based upon innumerable servants and the domination of an autocrat who has both force of character and colossal ideals.

The Inca must often have looked at the peaks of Huayna Picchu, five hundred feet above him. Several flights of steps and three small caves up there suggest that it may have been used as a signal station, such as was found on the topmost point of the mountain of Machu Picchu. To-day on the startling heights of Huayna Picchu are terraces, and the roar of dynamite proclaims that a road is being blasted across the face of the precipice, although it seems unbelievable that any living thing except an eagle or a goat would select such a spot for a habitation.

We know little of the history of Machu Picchu. Certain scholars have suggested that it may have been the original Tampu Pocco, the fabled starting-place of the three brothers who set out, each stepping from a separate window, and who ultimately founded Cuzco and the Inca

Empire. The three windows, so conspicuous in one of their principal temples, may have been those which are so tenaciously retained in all versions of the story. And we know little of the Incas themselves, beyond the fact that they evolved a governmental system in which there were no poverty, no crime, no idleness; that their word for rich, ccapac, meant rich not in material things but in spiritual qualities — in meekness, piety and clemency: and that their word huancanqui, which means 'you shall mourn,' is also the word for lovers. They were brave fighters and generous conquerors.

This is not much to know of the builders of Machu Picchu. The city itself communicates more. For whoever has stood in the white watch-tower and looked down upon the foaming river minimized to a brooklet, upon mountains dwarfed to hills, knows that nowhere upon this brimming globe, carrying within its bosom thousands of generations and unnumbered races, has Nature carved a setting so sublime, and man built upon it walls so eternal.

CHAPTER XII

LAKE TITICACA: A TRANCÈD MIRROR

To reach Lake Titicaca from Cuzco we must retrace the route through the Vilcanota and Collao Valleys, pass through Juliaca again, and thence to Puno — a trip which brings us in the early morning out upon a level plain, wan in the pale light, and sprinkled with frost, or with a light fall of snow.

The first rays of the sun slant across the sparkling ground, and glint on shallow estuaries flooding from a lake — a lake calm and crystalline — a lake lying nearer the sky than any other broken by man-made keel.

This extreme altitude — Lake Titicaca is twelve thousand five hundred feet above the sea, and higher than the crest of Fujiyama — imparts such clarity to the air that our vision is intensified. We see the coarse sedge grass — totora — along the margin, and we see its reflection in the water, precisely as defined, precisely as motionless. A wild duck rises from the shore, and wings its way across the lake, and its duplicate flies rhythmically in the mirrored surface beneath. Two worlds meet in this limpid boundary, and both worlds are unreal.

We step directly from train to boat, in a clairvoyant automatism, as our sleeping bodies might be lifted from bed to couch while our minds were still intent upon a dream. The sun is hot, for we are in the torrid zone, but the air is cold, for we are above the level at which all men,

except these few inhabitants of the sky, find it good to live. Are we hot or are we cold? We cannot say, for in this strange rarefied region across which we are now beginning to move, words, like the things they are wont to express, have shifted their meaning. Our senses are confused. Only our emotions are held in trance.

The tall reedy grass stands in close regiments about the margin of Lake Titicaca and pierces its surface far out from shore. And of totora the men who live here make their boats, for the country is treeless. These balsas are drawn up on every side — mere bundles of dried grass, tightly bound together, and fitted with a sail of thinly split reed. All morning we shall see men engaged in their aqueous harvesting. We shall see them cutting the totora, binding it into sheaves, towing it on balsas toward the shore, as the farmer brings in hay in wagons. We shall see the sheaves unbound and spread out to dry, and we shall see the finished vessel sailing lightly before the wind along the watery highway. And we shall see, along the shore, many discarded balsas sinking, soaking, decaying, returning to the elements of which they were composed.

Nothing on Lake Titicaca is the same as similar objects in our familiar waters. Even the substantial and tidy little steamers by which we cross the gleaming surface are not built as other boats are built. Made in England, they came across the Atlantic ignominiously and in piecemeal. Even more ignominiously they were hoisted to this inland lake, halfway to heaven, on the backs of mules or in boxes in freight cars. And finally in this port of ephemeral grass balsas they were stoutly put together, and launched upon

waters that had never before felt the prow of wood or steel. Even so might some fane of Keats, wreathed 'with buds and bells and stars without a name' be traversed by electric-light wires.

And yet we are duly grateful for this comfortable transportation. Without it we should hardly be able to cross in daylight a lake a third the size of our Ontario. Not with any degree of comfort could we sit and watch the darting birds, shattering the mirror of the water as they plunge for fish. Their prey is small but good, according to the taste of both bird and man, and forms the aristocracy and the masses of the lake's citizens. For only one species of fish — the boga — will live in this water, although many attempts have been made to stock it with sea-level varieties.

And neither does our little steamer sacrifice pleasure to mere speed. So near the shore does she plot her course that we can see the succession of estancias and comunidades — the thatched-roofed houses and the well-tilled fields — for here, now as from earliest times, the Indian possesses the soil. Blue- and red-clad figures, doll-like in the distance, are working in the golden barley fields. Tiny vivid creatures clamber up the zigzag paths across the mountain's face toward terraces above — incredible terraces, circling around a precipitous cliff to its very top, to catch the first rays and the last ones of the sun in their shallow steps. Terraces built at a time when Peru was as crowded as Japan or China by hands now clasping beneath the ground in mummified fingers the carved spear and the painted vessel. Centuries of weathering have worn some of these

terraces to dim ridges. Others are still sharp and clear in their outlines, and cultivated patiently by the descendants of the builders. In this remote land, so far above the world, such infinite and artificial sculpturing of the wild mountains seems fantastic in the extreme.

One ventures to believe that such scenes are not commonplace even to the men and women who have been born in these steep valleys and whose eyes have never rested on any other land or water. For since before the beginning of history Lake Titicaca has been sacred to the Indians.

The early tribes believed that after the Deluge — for the Incaic world of legend was as thoroughly doused and drenched as the Hebraic — the first rays of the sun to reach the emerging earth touched the Island of Titicaca and the lake to which it gave its name. Upon this island the Sun — their deity — placed his son and daughter whom he sent down from Heaven to redeem and save mankind. The first Inca, Ccapac, taking advantage of this legend, assured them that he and his wife, Mama Ocllo Huaco were that selfsame brother and sister, children of the Sun and saviors of the human race. The Indians accepted them as such, and on the Island of Titicaca they built a temple which seems, from the old accounts, to have rivaled the Temple of the Sun at Cuzco. The walls were lined with gold plates, and Father Blas Valera declared 'that the quantity of gold and silver heaped up as offerings, was so great that another temple might have been made of it, from the foundations to the roof, without using any other materials.' All the island was cultivated, and ter-

races were constructed and filled with fertile soil brought from a great distance. Here maize was sown, and when it was ripe was offered to the Inca himself, as sacred, and deposited in the Temple of the Sun at Cuzco in care of the Virgins. Later the seed was sowed in the garden of the Temple, and in those of the convents of the Virgins in the provinces, and the harvests were distributed among the people. 'Some of these grains,' explains Garcilasso, 'were placed in the granaries of the Sun, and in those of the king and state, that they might, as sacred things, guard, enrich, and protect from corruption the bread which was garnered for general substance. The Indian who could obtain a grain of that maize to place in his ears believed that he would never want for bread during the remainder of his life.'

Alas for the old legends! To-day the Island of Copacabana is chiefly known for its shrine of Our Lady of Copacabana, where many pilgrimages are made on the second of August and the second of February. As for the Island of Titicaca, we can still trace the outlines of the terraces where the sacred maize was cultivated. But the temple is gone and the golden plates that once lined its holy walls are at the bottom of the lake, where they and the rest of the treasure were thrown by the Indians at the approach of the Spaniards, and the island is now the farm of a wealthy Bolivian.

Six miles away is Koati — the Island of the Moon. Here, in walls as perfectly built as those of the Temple of the Sun at Cuzco, was the convent of the Vestal Virgins, with many rooms surrounding a central court.

Adolph F. Bandelier made extensive explorations on the Islands of Titicaca and Koati in 1895, embodying the results in a learned monograph to which all scholars dutifully refer. But those white men who live in Puno and Guaqui — men whose great haciendas give labor and living to hundreds of Indian families — will tell you that neither Professor Bandelier nor any one else has penetrated into the significance and heart of the matter.

It is not odd that no white man understands the Indian, for the white man seems incapable of understanding the Chinaman or the Negro or any one else whose pigmentation differs from his own. But it is curious that he knows so little about him. The white man cannot tell you by what system the Indian governs his comunidades, or communal lands. He cannot tell you whether his devout Roman Catholicism is a thin veneer over his instinctive and hereditary worship of the natural forces of nature, or whether it has supplanted that worship. Few of these Indians speak Spanish, and the Spanish they do speak is calculated to propitiate rather than to enlighten the hearer. Perhaps they are like the monkeys of whom they themselves remarked: 'They can speak, but they hide their speaking from the Spaniards lest they should be forced to get gold and silver for them.' The white man is glib in his information that all Indians must have an ounce of coca leaves daily in order to work. They mix the dry leaves with a little lime, put it in their cheeks, and it sustains them so that they can perform harder tasks and if necessary go without food for days. But whether the Indian chews coca to dull his misery or, like the white man

with his alcohol, to intensify his pleasure, no one can tell you — not even the missionaries who wrestle with this quid of coca as they wrestle with the Indian's soul.

The early Spaniards approached the Indians in quite a different attitude than the one in which the English settlers in North America approached the aborigines there. The Anglo-Saxons and the Dutch, finding the Indians still in the hunting stage, too wild to subdue, slew them, drove them back, and ultimately bought them off. The well-known picture of the Puritan family going to church through the New England woods, with the father masterfully displaying his musket to frighten or shoot any lurking redskins, illustrates the situation better than the artist realized.

In South America the situation was entirely different. The Indians were far more advanced in their civilization. Therefore, instead of killing them off, the Spaniards exploited them, enslaved them, and intermarried with them. And instead of shooting at them when they came near the churches they flogged them to the church door and across the threshold. The circumstances which forced these two policies were obviously dissimilar. The motives of the pioneers were the same. And the result upon the Indian has been to leave him as inexplicable in South America as in North. He has, however, this tremendous advantage in the former continent. The prejudice against all color — red, black, yellow, or brown — which is a characteristic of Anglo-Saxon races, does not exist in South America. The Latin holds to his respect for caste and for class. If he looks down upon the Indian it is because the Indian is

ignorant, not because his skin is coppery. As soon as an Indian — or a mestizo — rises through his own brains and acquires proper manners, he is accepted socially and politically by the people in that class to whose level he has attained. This is what is meant by the frequent statement that there is no Indian problem in South America. There is the problem of a great mass of semi-civilized people who happen to be Indians, but this is a problem of education rather than of race.

Lake Titicaca has been the stage for a long drama, not yet concluded. It has seen the red man, under the beneficent guidance of the Inca, devote himself to industry that brought him prosperity and to a worship that brought him peace. It has seen him tortured by the white invader to find gold and silver, and forced by him to accept a complicated theology and ritual. At present the Seventh-Day Adventists are taking their try at the inhabitants of the shores of the lake. It is reported that some of the converts are rather confused concerning the virtues of Methodism and those of the Seventh-Day Adventists — grasping chiefly that their rosaries and crosses and pictures of the Virgin are quite wicked, along with the comforting quid of coca and the occasional alcoholic spree which breaks the monotony of the days. Possibly the Seventh-Day Adventists will succeed. Since no one can say with any assurance just how deep the roots of Catholicism have struck, it is perhaps possible that Protestantism might furnish as easy an overlay for the secret but fundamental worship of Nature which has never been lost.

And now, two miles above the surface of the lake, the

serrated tops of a dozen Andean mountains begin to glow in the late afternoon light. Jagged against the sky in a semi-cyclorama, Mount Illimani reclines majestically under her impenetrable shroud of snow. The mountains near the shore are reflected without a flaw in the hushed waters, and the patches of quinua on their steep sides turn pistache color in the parting rays of the sun. They are pistache also in the identical glassy fields below. Where we look for clouds beyond mountains we see only more mountains, folding away and away into rosy and purple infinity.

An Indian in his balsa is turning homeward, his reed sail hoisted to catch the breeze. It is chilly upon the violet water, and it must be growing cold indeed in the small adobe hut toward which he is steering his straight course. On, on he sails, a primitive motionless figure, ethereal in the ethereal light, while beside him sails his image in a balsa of reflected reeds.

CHAPTER XIII

FROM LAKE TITICACA TO LA PAZ, ACROSS THE BOLIVIAN ALTIPLANO

After a phantasy such as Lake Titicaca what scene can follow that is not an anticlimax? To lift us into higher unreality would strain our emotions as well as our breathing apparatus, and to drop us too abruptly into the mundane would be a violation.

Bolivia, like other countries, has its deficiencies. But inartistic arrangement of scenic effects is not one of them. The third largest country in South America, and the only one with a frigid climate in a torrid zone, she possesses every variety of temperature and topography, from tropic jungle to glacier field, and with a fine sense of fitness she now presents, as transition between Lake Titicaca and La Paz, her altiplano — a vast plateau, half a thousand miles long, bare except for fields marked out for quiñoa and canahua and bitter potato, untenanted except for isolated adobe huts crude as those of the Tibetan uplands. And yet this treeless, undulating plain, with its not infrequent streams, has its wild appeal. During the rainy season it is green, and thunder and lightning of gigantic proportions vibrate in the skies above it. Now in the dry season, it is brown, and the stubble in the fields is dry.

The train passes steadily on, mile after mile, across the vast expanse, and we can look directly into the tiny windowless and fireless dwellings. Everything is the color

of earth: the ground, verdureless except where crops are planted; the houses made of sun dried blocks; the household utensils of clay; the brown-skinned people. Every form, animate and inanimate, is moulded from a pinch of earth, and seems but briefly removed from the dust to which it must return.

These scattering and unlettered folk — existing on chalona, a coarse salted mutton, which they have dried in the sun by day and frozen in the cold by night, and on bitter potatoes, which they have raised, frozen, pressed, and ground into a sort of tasteless sponge (chuño) — without education, without warmth, except for the heat of the sun and an occasional meager fire of llama dung — these are the Aymará Indians.

Certain scientists say that the Andean antiplano was once only half as high as it is to-day and that the prehistoric inhabitants may have tilled fields of wheat and corn. Now Bolivia's richest harvest is below the ground in the dark and hidden realm of minerals.

It has, in reality, always been so.

Potosí, the mountain of silver, is one of the fabulous spots of the world. It was known through the Colonial Period as the Imperial City, and imperial indeed are the accounts we may still read of it. The Indians, under conscription, were forced to work in the silver mines — eight millions of them perished there — and upborne by the flood of precious metal there rose, in the frigid Bolivian heights, a Bagdad, a Babylon, a Rome. In 1556, eleven years after the founding of the town, the accession of Philip II to the throne of Spain was hailed by a celebration

costing eight million dollars. The following year three million were spent on water works. Before there was a white settlement in North America, Potosí had fourteen dancing schools, thirty-six gambling houses, and a theater to which the admission was from forty to fifty dollars. 'The ladies of Potosí had jewels and dresses for each fiesta which were worth from twelve to fourteen thousand dollars. One lady spent five hundred dollars merely for pearls for her embroidered overshoes. The mestizas wore sandals and belts of silk and gold, skirts and jackets of fine cloth of silver, pendants and chains of gold and other rich jewels.' But most glittering of all are the stories of Doña Clara — she whose palace was the gathering place for the wealthy and powerful men of the time. 'She had,' says Martinez y Vela, 'as many chemises of fine cambric and Dutch linen as there are days in the year, and a change was made every night; four rich bedsteads of wood and bronze, with feather beds and draperies of beautiful cloths, and she changed from one to the other every three months.... She had a large number of slaves, encomiendas of Indians, and white servants, whom she paid very liberally. Her treasure of gold, silver, jewels, precious stones, pearls, and ornaments was immense. Her table service was all of silver and gold; filigree with emeralds and rubies was abundant among her ornaments.... Her reception room was magnificent. The Venetian mirrors had frames of burnished silver; her furniture was adorned with gold and mother-of-pearl, upholstered with gold and silver cloth from Milan.... Her writing-desk was of ebony and ivory; her floors were covered with rugs from Cairo, Persia, and Turkey.'

The bewildering tales of Potosí crowd the pages of the early chroniclers. There were duels fought on horseback and with lances; jousts with the contestants on splendid mounts, with waving plumes and gorgeous costumes, witnessed by a mediæval crowd in silk and rags. We are not accustomed to think of such pageantry upon our hemisphere, four and a half centuries ago.

But Potosí and Doña Clara went the way of the wicked, according to the most approved standards of the moralists. Quesada recounts that 'on a day that was comparatively warm for the rigid climate of Potosí, a woman of ninety-two years old entered the church of Merced. She was poorly clothed, for she was accustomed to beg and lived from charity. She knelt and heard mass with great devotion, and prayed for a long time. This beggar was the splendid Doña Clara.'

Nowadays little silver comes from Potosí. In an era of the automobile and of tin plate industries, tin proves to be Bolivia's most valuable product, and since 1920 has constituted ninety per cent of her annual exports. No fresh sources of tin of any importance have been discovered for a long time, and geologists are inclined to believe that there are none. And in this increasingly valuable and diminishing commodity Bolivia stands second to the Straits Settlements. A single American company produces eleven per cent of the world's annual output. In 1928 forty thousand tons of metal were produced by lode mining in Bolivia and Chile — and mainly in Bolivia. It is interesting to note in this connection that while the British Empire is the principal producer of tin in the world, owing

to the Straits Settlements, and smelts ninety per cent of it, the United States is the principal consumer.

No, there are no more jousts on a Field of Cloth of Gold in Bolivia, but she still holds riches sufficient to take her place among the wealthy countries of the world. Gold and silver, copper, lead, bismuth, antimony, and tungsten are all lying in these mountains rising from the great altiplano. But minerals require miners and mines, and these require railroads, and railroads require money. And Bolivia at present has none of these things but the minerals.

Although she could support thirty millions, she has a scant three million population, of which three fourths are mestizo, Indian, and cholo. There are a few Germans, French, Americans, and British, and practically no Orientals or Negroes. A mere handful of pure-blooded descendants of the Spanish conquerors expend their energies, as the Southerners in our country did for so long, in recounting the honors of the past rather than in improving the opportunities of the present. Scions of old families in Sucre and Cochabamba flatter themselves that their diction is still the purest Castilian. But what Bolivia needs to-day is men who will help her get highways and railroads, who will lift the products of the tropical lowlands and virgin forests — for two thirds of her territory is east of the Andes — up to the altiplano, where three fourths of her people live, men who will extract the wealth out of her mountains, and infuse it into the lives of her inhabitants.

At present that small minority of citizens who possess an Occidental background are so widely separated in isolated towns that social and political antagonisms are

inevitable. When one is in La Paz, it is easier to get to Buenos Aires in Argentina, or to Arica in Chile, or to Mollendo in Peru than it is to get to Sucre. Bolivia del Oriente, with its oranges, bananas, cocoa, coffee and sugar cane and rice, so sorely needed on the altiplano, is farther away from it — measuring distance by time — than is New York. While, as Herbert Adams Gibbons points out in his 'New Map of South America,' it is very agreeable for the tourist and very convenient for the Argentinian or Chilean or Peruvian business man to be able to get in and out of Bolivia, it is far more important for the Bolivians themselves, from a political, military, and economic point of view, to have intercommunication between its various sections, and to develop a national solidarity within their own boundaries.

The word 'boundaries' is rather a delicate one to use in Bolivia. Her present territory is hardly a third of what she claimed at the time when, during the War of Independence, a few local forces captured La Paz and established the republic of Bolivia in 1825. Before this most of what is now Bolivia had been under the administration of the viceroyalty of La Plata. General Sucre, Bolivar's lieutenant, named the new country in honor of his chief, and the capital was named for Sucre himself. But no one knew then, or knows now, exactly the extent of the new republic. The Bolivians have always been more eager to fight for frontiers than to stake them out and bring them under administrative control. The classic example of this occurred in 1910 when she was having a dispute with Brazil about boundary lines. Bolivia sent her soldiers forth to

defend her honor and her territory. The soldiers marched and marched. They marched hundreds of miles past the nebulous boundary line and never knew they had crossed it. Finally the bewildered fragment that survived landed in Brazil, having followed one of the tributaries of the Amazon. The Brazilians, with a fine sense of irony, sent them back to Bolivia via the Straits of Magellan.

It was this predisposition to quarrel about a region instead of mapping it first, which led to what threatened to be an interminable dispute between Bolivia and Paraguay about the Gran Chaco. The rational observer found it hard to see why Bolivia wanted oil fields when she has not yet devised a way to develop her mines, her lumber, her rubber, or her agriculture.

Nationality is evolved from geographic, racial, and historical causes. If Bolivia is not yet a homogeneous nation, we have only to refer to these three things. Geographically she is vast, but in many areas the low temperature, thin air, and extreme dryness are fearful handicaps. Racially she is under the disadvantage of being underpopulated and having her best elements separated from each other in cities that have no intercommunication. Historically she is still incohesive.

One of the things which makes travel in South America so engrossing is that we can see, with our own eyes, nations in the process of evolution. Here the political and nationalistic struggles which extended over centuries in Europe are being enacted, in terrific tempo, to-day. The culture which has fossilized in certain ancient European countries is visibly emerging in these new ones. To be intellectually

young and fluid, with limitless potentialities, even although prone to error, has undeniable advantages over static and correct age, as we of the youthful United States should be the readiest to admit.

An hour before we reach La Paz the train passes directly through Tiahuanaco, the vastness of whose ruins, once part of a great city existing twelve thousand feet above the sea, perpetually intrigues writers and archæologists. Since they differ in their structure and sculpture from those found elsewhere they have been put in a class by themselves. Squier says, 'Nowhere else in Peru do we find such sculptures. They are, as regards Inca art, quite as unique in Peru as they would be on Boston Common, or in the New York Central Park.'

This, perhaps, is not incomprehensible, for modern archæology has made it evident that Tiahuanaco had nothing whatever to do with the Inca Empire. It existed and may have been destroyed long before Chan-Chan was thought of. It belongs to the first or megalithic epoch — the same period as the culture of Paracus. If such chronology is more bewildering than illuminating to the layman, he may be content to know that Tiahuanaco probably existed before the Children of Israel fled from Egypt, before the first stone was laid of the Pyramids, and that the monolithic portal of the Temple of the Sun, cut from a single block of Andesite thirteen feet, five inches long, seven feet, two inches high, and eighteen inches thick, is the largest known example of stone-cutting in the world. In its center is a square door, four and a half by two and a half feet, and the carved figures which surround it, with

human bodies and hands and feet but with the heads of condors, are curiously suggestive of Egypt. And so are the cups and bowls, shaped like cats — for to-day there are no cats in this region.

How long Tiahuanaco remained intact with its terraced mounds and mosaic walls in this frigid altiplano, or if it was frigid then as now, is a matter of speculation. Lake Titicaca may have washed against its foundations, and since the relics have all been found within ten feet of the surface buried in sand, it is possible that water may at one time have covered the whole area. It may have been a city of dwellings or it may have been a sanctuary and place of refuge. Its builders may have been a red race or a white one. It has even been plausibly argued, with many verses of Scripture as proof, that the Phœnicians brought the gold of Ophir from here. There is nothing in the Inca records to explain Tiahuanaco. Garcilasso, writing three hundred and fifty years ago, gives some of the legends that had come down to him. He quotes Diego de Alcobasa to say: "'Among other marvelous things at this place there is a hill, made artificially, and so high that the fact of its having been made by man causes astonishment; and that it might not be loosened, it was built upon great foundations of stone. It is not known why this edifice was made. In another part, away from the hill, there were two figures of giants carved in stone, with long robes down to the ground, and caps on their heads; all well worn by the hand of time, which proves their great antiquity. There was also an enormous wall of stones, so large that the greatest wonder is caused to imagine how human force could have

PRE-INCA RUINS AT TIAHUANACO

raised them to the place where they now are. For there are no rocks nor quarries within a great distance, from whence they could have been brought. In other parts there are grand edifices, and what causes most astonishment are the great doorways of masonry, some of them made out of one single stone. The marvel is increased by their wonderful size, for some of them were found to measure thirty feet in length, fifteen in breadth, and six in depth. And these stones, with their doorways, are all of one single piece, so that it cannot be understood with what instruments or tools they can have been worked."'

But although we know little of its origin or destruction, or whether it is, as Hudson declares, older than Thebes, certain it is that Tiahuanaco has for many centuries been thrown down and tumbled over the plain. The Indians have built their rude huts out of its carved fragments. When the railroad, which runs directly through it, was being laid, five hundred trainloads of stone were used as ballast. It has been a common quarry from time immemorial. The village boys use one of the great stone idols as a shooting target. And in spite of it all, the city still maintains, over hundreds and hundreds of acres, its red sandstone outline of fortress, temple, palace, and hall of justice. A huge monolithic figure with angular head and thick lips grins into the very railway coach as we pause at the station.

Archæologists mourn or rave over this sacrilege. Writers inveigh against Bolivia for not protecting this most valuable of her antiquities. And meanwhile the humble life of to-day, irresistible because it is life, continues to encroach

upon the majesty and mystery of the past. And surely those original inhabitants, whose portrait effigies reveal intelligent faces with thin lips and aquiline noses, would be the first to admit that this small spinning particle of matter which we inhabit is for the living. Those clever and sensual men and women whose mocking animalism and robust obscenity are so vividly recorded in their ceramics have relinquished their day of earthliness and power.

This globe which may be regarded as a cemetery of the ages is nowhere more closely inhabited by the dead than in South America, where the dryness holds intact the flesh and bones which in other climates mercifully disintegrate and are returned to the elements of which they are composed. Fortunate is the instinct of each new generation to spring, newly revived, into being, and not to creep, hushed and awed, through the cemetery of the dead. Fortunate it is that small boys can joyously aim their sling shots at the stone lineaments of those whose time of living and loving is over, and whose ponderous dwellings open now only to the stars.

CHAPTER XIV

LA PAZ, PAINTED BY SUNLIGHT

It is, perhaps, quite according to the laws of individual and national psychology that the people of the United States, having for so long smarted under the supercilious criticism of Europe, should find satisfaction in adopting a similar attitude toward a new, an undeveloped and distant republic of which they know little. Bolivia is, in the mind of the average American, one of the opéra-bouffe countries, peopled with savages, fugitives from justice, political grafters, and half-breeds. It is always in revolution, it has no history and no national solidarity, and it is bankrupt. It has plenty of minerals which its population is too ignorant to mine and agricultural areas which it is too lazy to work.

With this idea comfortably undisputed in his mind, an occasional tourist strays into La Paz out of curiosity, or an irritated business man takes himself there for reasons of necessity. And to his surprise he finds himself in a handsome substantial city, with paved streets, electric cars, and public buildings that would compare with the good ones in the United States; a cathedral which, when finished, will be as magnificent as any in South America — which means more magnificent than those in the United States; with statues and plazas and well-dressed, intelligent-looking men and women who carry themselves with dignity. There must be something wrong, muses the puzzled traveler, as he sits down at the hotel table. And his confusion grows as he finds himself confronted by the kind of course dinner

which is characteristic of France or Peru, but unfortunately not of Great Britain or the United States. Yes, there must be something wrong, he repeats to himself. There was indeed something wrong. It lay in his ignorantly based preconceptions.

La Paz, while not officially the capital of Bolivia, is practically so. The president, his official advisors, and the foreign diplomats live here, and the nation's congress meets here, although the supreme court still holds it sessions, and the archbishopric its seat, in inaccessible Sucre three hundred miles southeast. Beside its convenient location, La Paz has another drawing card in that it is one of the most satisfactory of all the South American cities, pictorially speaking. In 1545 a dozen Spanish adventurers, under Alonzo de Mendoza, found the remains of an ancient civilization in a deep cañon ten miles long and three miles wide, and decided to build their own city there, calling it, in the sentimental fashion of those bloodthirsty conquerors, La Ciudad de Nuestra Señora de la Paz — the City of Our Lady of Peace. It is almost two and a half miles above the sea, and, as if that were not sufficient to keep it to an annual mean temperature of fifty degrees, Mount Illiamani, which is a mass of white peaks wherein lies a little lake, furnishes effective refrigeration. One approaches La Paz from El Alto, and the traveler gets his first glimpse of it when he comes out over the brim and looks down, fifteen hundred feet, to a jumble of red roofs and towers and domes and green plazas by day and a bowlful of brilliants at night.

Once within the city its individuality intensifies even

more. Its streets ascend so sharply as they approach the sides of the cañon that every corner offers a vista. The air is so thin and crisp, the sunlight and shadow so pronounced, that all colors and outlines are supernaturally clear. And on this uniquely set and illuminated stage surge, particularly on market and feast days, hundreds and hundreds of Indians, dressed as only Indians can dress, in tribal headgear and flashing earrings, in full purple skirts and orange shawls; the men in ponchos of striped red and blue, the women with babies slung across their backs in cerise and green scarfs. It is a violent kaleidoscope of primary colors — moving, shifting, glinting in the sun.

Under their stiff hats the men wear knitted caps with earlaps which they never remove until age and use disintegrate them. The women have a similar tenacious custom in regard to their petticoats. Day or night, in sickness or in health, the many petticoats which give them their characteristic silhouette are never removed. Every year a new petticoat is put on, and in time the inner ones fall off. But the waist-bands remain, and a woman's age can be determined at a post-mortem by the number of these bands.

Up and down the tipped and sun-splashed streets these bright forms hurry with firm, straight, barefoot tread. Some are driving donkeys or llamas, but the majority are carrying their hugh unwieldly burdens upon their own backs. Their bare or sandaled feet make no sound, and their voices are soft, so that there is a curious absence of noise despite the crowding. If it is Sunday — market day

— they squat in dazzling rows along the sidewalks and in certain plazas, displaying their handmade lace, bits of pottery, basket work, embroidered blouses; their black and red and purple corn; their yellow and pink and red potatoes; their chickens alive and dead. They have brought these things forty or fifty miles from the Yungas valleys, that tropical region on the eastern slopes of the Cordillera Real, where a heavy rainfall produces coco, corn, coffee, and sugar. On certain days as many as five thousand donkeys, mules, and llamas come over the trails from the Yungas valleys to La Paz. The llamas bring bags of taquia, which is their own dried dung, and which when burned in a stove produces little smoke and no sparks and is the principal fuel in the city. Coal is known to exist in the Copacabana Peninsula in Lake Titicaca, but the mines are not yet developed, and most of the coal is imported from foreign countries — and very limited indeed must that importation be, thinks the traveler, shivering in his hotel bed.

This Sunday morning in La Paz is our first close view of the Aymará Indians, a very different race from the submissive Quichuas of the north, and supposed to be ethnologically older. They have the deep chest developed by the necessities of the altitude, and generations of mountain climbing have produced a thigh which is shorter instead of longer than the leg. The Aymará can march great distances. In the old days the post road from Tacna to La Paz, two hundred and fifty miles, was regularly done on foot in five days. This rugged body, and determined and dogged temper, the German officers who train the

Bolivian army have found excellent material, and the goose step is taught and learned with mutual delight. But although the Aymarás love to be in the uniform of either soldier or policeman, they are very skillful artisans, doing creditable work as carpenters and masons and making furniture of the native mahogany, rosewood, and black walnut.

But if the Aymarás and the hot Yungas valleys sound far away from this chilly city, how much more remote is that backwoods of Bolivia — a region larger than Germany, where grow trees of ebony, cedar, mahogany, quebracho, and walnut, of such weight that their logs will not float in water. Here live wild Indians, with painted faces and bows and arrows, who have never seen a white man. Here grows the rubber which is Bolivia's most valuable export after her minerals, and which is shipped out by way of Brazil. Two thirds of Bolivia is trans-Andean, and has not only forest regions but fertile valleys sloping from the mountains toward the east, south, and north, and falling into a plain which is a continuation of the healthful cattle lands of Argentina, Paraguay, and Brazil. Here are prairies not unlike those in Illinois and Iowa fifty years ago. This little-known region furnishes cattle, wheat, cacao, tobacco, corn, and cotton. Tea also can be grown here. The cinchona tree, from whose bark quinine is made, is indigenous.

Strange and unexplored Bolivia! A country where copper is found in its pure form in glittering sheets, the only region where it so exists except our own Lake Superior district; a country where tin and gold, petroleum

and bismuth lie buried, waiting for men and machinery to bring them to the markets of the world; a country one fourth the size of the main body of the United States, with no seaport and with a population of three or four people to the square mile — only a hint of this Bolivia do we glimpse in driving through the city, or out to the suburbs, or in sauntering across the Plaza Murillo, or being proudly shown the executive mansion with its staircase of purest marble from the quarries of the Desaguadero River.

Within those handsome banks and offices which give the city such a prosperous air, financiers and statesmen are concentrating over the problems of a country, eighty per cent of whose revenues are mortgaged and nearly sixty per cent pledged to the American refunding loan of 1922. Those who are interested in this situation will find all the information in Mrs. Margaret A. March's book 'The Bankers in Bolivia.' The average visitor will be satisfied to know that since 1922 the country's finances and the National Bank have been under the control of a Permanent Fiscal Commission. Such debt is indeed a load for any country, but many new republics, including our own, have been forced to start their national life by borrowing, often at a high rate of interest and under more humiliating conditions than those endured by Bolivia.

La Paz is making a definite effort toward progress. Although the cathedral, which has been almost a hundred years in building, is always pointed out to the visitor as one of the marks of this progress, the practical North American is more apt to be impressed by the fact that the population of the city has doubled in the last decade; that

the new houses are bathroomed in modern fashion; that there are Boy Scouts, and a School of Aviation, and that the National University has been radical enough to branch away from strictly classical standards, and now includes schools of commerce, engineering, mining, agriculture, and arts and crafts. There is a National School of Commerce, and a Normal School for Teachers, and the American Institute for Indians at La Paz, supported by the Methodist Episcopal Church, receives a yearly appropriation from the Government, as does a similar school at Cochabamba.

It is, of course, impossible to deny that Bolivia lags behind the more progressive republics of South America. Lack of population, lack of roads, and peculiar climatic conditions have retarded her development. Her political and financial affairs have always been more or less chaotic, and her wealthy citizens have had an unpatriotic way of going to live in Paris instead of staying at home and contributing their taxes and services to their own country. And having granted all this, we are still face to face with the fact that Bolivia is too large and too potentially rich and too varied to be dismissed with an airy wave of the hand by a country — our own — which takes ninety per cent of her exports and furnishes the bulk of her imports.

Before we leave this land of tropical jungles and icy snows, there is one small inhabitant which we should consider, for we shall not find him outside the Andean zone. He may be coaxed to exist, but he suffers a sea change, as the clever man who took some chinchillas to California to breed for the fur market, discovered. Although he went

by easy stages to acclimatize his precious stock, he had the dismaying experience of seeing them shed every particle of fur at Panama, and appear in utter nudity!

These tiny creatures, for they are only about the size of guinea pigs, live in the crevices and gaps of the highest Andes. As if they knew the dangers waiting for them, they never venture out in daylight, but as soon as darkness gathers, they come forth to gambol and frisk, to feed and fight and mate. In their wild state these fairy-like little phantoms — for so they appear in the white moonlight — do not drink water but quench their thirst with the juice of paja grass and other herbage. Soft as puffs of milkweed down, they tear and race and frolic in the chill moonlight, darting away so quickly at the sight and scent of an intruder that they seem to vanish in the frosty air. But the trappers have ways of catching even so elusive a little animal. Dogs and lanterns procure the dainty pelts, and the trapping of the chinchilla at one time reached such proportions that extermination was imminent. Although the Government has now forbidden either the hunting or the exportation of the furry sprites, it is not noticed that their fur has ceased to adorn the garments of ladies who can afford to pay for it.

During the trip out of Bolivia down to the coast of Chile, we have time for reflection upon man's policy toward the other inhabitants of this globe, and we recall those pages written by one who knew and loved 'the chinchilla of the desolate mountain slopes: the swiftest, wildest, loveliest, most airy, and most vocal of small beasties.' Who but Hudson could write: 'What a wail

there would be in the world if a sudden destruction were to fall on the accumulated art-treasures of the National Gallery, and the marbles in the British Museum, and the contents of the King's Library — the old prints and mediæval illuminations! And these are only the work of human hands and brains — impressions of individual genius on perishable material, immortal only in the sense that the silken cocoon of the dead moth is so, because they continue to exist and shine when the artist's hands and brain are dust: — and man has the long day of life before him in which to do again things like these, and better than these, if there is any truth in evolution. But the forms of life in the two higher vertebrate classes are Nature's most perfect work: and the life of even a single species is of incalculably greater value to mankind, for what it teaches and would continue to teach, than all the chiseled marbles and painted canvases the world contains; though doubtless there are many persons who are devoted to art, but blind to some things greater than art, who will set me down as a Philistine for saying so. And, above all others, we should protect and hold sacred those types, Nature's masterpieces, which are first singled out for destruction on account of their size, or splendour, or rarity, and that false detestable glory which is accorded to their most successful slayers. In ancient times the spirit of life shone brightest in these; and when others that shared the earth with them were taken by death they were left, being more worthy of perpetuation. Like immortal flowers they have drifted down to us on the ocean of time, and their strangeness and beauty bring to our imaginations a dream and a

picture of that unknown world, immeasurably far removed, where man was not: and when they perish, something of gladness goes out from nature, and the sunshine loses something of its brightness. Nor does their loss affect us and our times only. The species now being exterminated, not only in South America but everywhere on the globe, are, so far as we know, untouched by decadence. They are links in a chain, and branches on the tree of life, with their roots in a past inconceivably remote; and but for our action they would continue to flourish, reaching outward to an equally distant future, blossoming into higher and more beautiful forms, and gladdening innumerable generations of our descendants. But we think nothing of all this: we must give full scope to our passion for taking life, though by so doing we "ruin the great work of time"; not in the sense in which the poet used those words, but in one truer, and wider, and infinitely sadder. Only when this sporting rage has spent itself, when there are no longer any animals of the larger kinds remaining, the loss we are now inflicting on this our heritage, in which we have a life-interest only, will be rightly appreciated. It is hardly to be supposed or hoped that posterity will feel satisfied with our monographs of extinct species, and the few crumbling bones and faded feathers, which may possibly survive half a dozen centuries in some happily placed museum. On the contrary, such dreary mementoes will only serve to remind them of their loss; and if they remember us at all, it will only be to hate our memory, and our age — this enlightened, scientific, humanitarian age, which should have for a motto "Let us slay all noble and beautiful things, for to-morrow we die."'

CHAPTER XV

ARICA TO VALPARAISO: STRANGE CROPS OF THE CHILEAN COAST

From Bolivia we come out into Chile: from one of the most backward of the South American republics into one of the most progressive; from a country with no seacoast and no ports to one with twenty-nine hundred miles of seaboard and with sixty-five ports; from a land of mixed races to one whose population is far more homogeneous than that of the United States; from a country eighty per cent of whose revenues are mortgaged and whose capacity for borrowing is exhausted, to one whose credit is sound in every banking center in North America or Europe; from a land of antiquities to one of modernities.

It will take us six days to steam to Valparaiso, and when we get to that port, five thousand three hundred and thirty-five miles from New York, we shall still be only halfway down the coast of a country that if superimposed upon our own would reach from the Woolworth Building in New York to the City Hall in San Francisco and then extend fifty miles more to sea.

The coast will be sterile of vegetation except for an occasional oasis about a trickling river. Ports which seem to be only a knot of stark little dwellings stuck upon the cliffs will be our only sight of human life. Every day will be colder than the day before. And yet this week of slow penetration into Chile should give us some appreciation of

that remarkable country which, grappling with what might be considered unsurmountable difficulties of topography and situation, has become one of the recognized powers in the family of nations.

Books of travel are always inviting one to 'look at the map.' It is hardly necessary to look at the map as we progress along the Chilean coast. For so narrow is this sword-shaped republic, averaging a hundred and sixty-seven miles in width, that one can almost see it all from the boat. And what do we see? Cliffs — tawny and rose and palest lemon in the varying lights of daytime and twilight. Cliffs shelving sharply down to the sea, while far behind loom, on clear days, the distant Andes. That is all. These sculptured mountains and this sea so deep that for miles and miles there is not a single breaker against the shore. But seeing is a matter of the mind as well as of the eye. And looking at Chile thus we are confronted with a country that has converted every disadvantage into an advantage.

Since she is the most remote of all South America countries from Europe she has thereby saved herself from the flood of inferior immigration. Since her climate is cold she has not attracted the Negro, although there was slavery in Chile in the eighteenth century, as elsewhere in North and South America. Since only the energetic can wrest a living from a land bounded on the north by a thousand miles of desert, on the west by the second highest mountain range in the world, and on the remaining side by chill waters, she has developed a hardy race of workers, sailors, and fighters. The blood of the tenacious Basque, mingled

with that of the unconquerable Araucanian, has created an unique race. The struggle for existence and supremacy has made this race dynamic.

It is quite appropriate that the first Chilean port the traveler reaches, whether he continues directly south from Mollendo or comes down from La Paz, should be Arica, for this neat and sparkling city in its oasis of green, with its wharves and public buildings arranged along the water's edge, with its new white hotel, six stories with roof garden and tiled dining room and bright suites, is a symbol of Chile's determination to win what she sets out to win, and, having won it, to uphold within it a standard of progress.

Although Arica — the name is derived from the Aymará: *ari*, and *ca*, an opening — looks sufficiently prosperous, it does not suggest that at one time it was important enough for its land values, especially those of wharfage, to exceed those of New Amsterdam. Neither does there at first sight appear any obvious physical feature commensurate with its long notoriety. For this cheerful clean little city was the perplexing, the baffling, the apparently insoluble crux of the tedious Tacna and Arica dispute which disturbed the peace of Chile, Peru, and Bolivia for over forty years and even threatened the equanimity of larger powers.

Arica belonged originally to Peru and was the scene of a battle of much patriotic sentiment. It was toward the end of the long War of the Pacific. The war had really started years before, when Bolivia and Chile began to struggle against each other for possession of the nitrate fields. Peru joined Bolivia in accordance with a secret treaty, and when

her ally dropped out continued the contest. It was upon these very hills that we are looking at to-day that the two hereditary enemies came to grips. There was a tremendous battle which ended when Bolognesi, who was commanding the Peruvian forces, leaped on horseback into the sea from yonder Gibraltar-like bluff or morro. Whether he leaped from the morro in despair when he saw that his army was worsted, or whether he was literally pushed off by the approaching Chileans, or whether his horse ran away with him, is one of those delicate questions which will always receive different interpretations from partisan historians. At any rate, over he went, horse and all, and from that moment Arica and its morro were sacred soil to the Peruvians.

Peru lost the war. She was most terrifically and humiliatingly beaten. The Chileans not only occupied Lima for a year, but their sacking of it was so thorough that they even carried off the zoo, in its entirety, and set it up in Santiago! Beside her loss of territory Peru paid Chile a war indemnity which, when we consider the value of the territory ceded, was the largest in the history of the world. According to the treaty of Ancon in 1883, the province of Tarapaca went to Chile outright, but the provinces of Tacna and Arica, although they were to be occupied by Chileans, were to remain as buffer states. After ten years a plebiscite was to be taken and the provinces were to decide for themselves if they would be Peruvian or Chilean. During these ten years politics were played on both sides, as is inevitably the case in territories of this character. Chile tried to break up Peruvian solidarity. Peru tried to

maintain her sentimental supremacy. The taking of the plebiscite was deferred first for one reason and then for another. Bolivia began to get restive. To be sure she had in 1884 signed a treaty ceding the whole of her seacoast to Chile, but since both her neighbors were quarreling it seemed a propitious time to try to get back some port or other. Peru and Chile invited various powers to intervene. All politely refused. England explained, very urbanely, through Lord Balfour, that she really didn't speak the language. The affair dragged on. The world became bored with the continual squabbling. The Peruvians complained that the Chileans were expelling Peruvian priests and closing Peruvian churches in Tacna. Chile went into intricate sophistries about the treaty of Ancon. Peru refused to relinquish what she considered her historical heritages: Chile was equally determined to retain the fruits of her political prestige and national prowess. Finally the United States, never afraid to rush in where angels fear to tread, undertook, under the régime of President Harding, to adjust the matter. Negotiations dragged along under Coolidge. Secretary Kellogg did his best. He proposed that Tacna and Arica be ceded by Chile and Peru jointly to Bolivia, with the provision that Arica be maintained as a free port. Naturally Bolivia was delighted with this prospect. Quite as naturally Peru, Chile, and — most significant of all — the international bankers who would have had to advance the money for the purchase refused to consider it. General Pershing was sent down as President of the Plebiscite Board and stayed in Arica for some months. General Lassiter followed General Pershing,

and after an investigation found conditions in such confusion, with Peru charging intimidation and mob terrorism from Chile, and Chile charging falsified church registers and subsidized lawyers against Peru, that all idea of a plebiscite had to be abandoned. After President Coolidge ordered the plebiscite willy nilly, it was found worthless. Finally the Honorable Alexander Moore, who had been our ambassador to Spain, was sent down to help bring into agreement two countries which had severed diplomatic relations. Clever and kind, Moore was instrumental in bringing them both into conference.

'You know it's awfully hard to settle matters if neither of you two countries will speak to each other,' he explained to President Leguia.

Finally, in May, 1929, the long-drawn-out problem was solved. Arica now belongs to Chile, Tacna to Peru. Chile has also paid Peru six and a half million dollars. The world at large has drawn a sigh of relief, Chile and Peru both profess satisfaction, and even preen themselves on the bloodless settlement. Bolivia still complains. She wants a seaport, she says, although she is an inland country, and ceded her ports away of her own volition. In vain Peru explains that Mollendo is a free port for Bolivia. In vain Chile reiterates the same about Arica and Antofagasta. Besides these three free ports to the Pacific, Bolivia has access to the Atlantic through Paraguay, Argentina, and Brazil. She can import and export anything she wants through these gateways, except munitions. Her dissatisfaction with the arrangement strongly suggests that it is munitions she wants. The powers that would suffer from

the use of such munitions remain firm in their determination that they shall not be admitted. So in spite of the assiduity with which the Bolivian soldiers practice the goose step under their German officers, it looks at present as if her military achievements would be confined to that.

These things come back to us as we stand in the pretty little plaza of Arica. We see the harbor which Sir Francis Drake bombarded; we see the cross on the hill which marks the spot where the desperate Peruvians blew up their own fort; we see the *morro* where General Bolognesi took that dreadful leap into the sea. The building where General Pershing endured his most uncomfortable tenancy is visible, and the long barracks where the conferences were held. The spot where the Peruvian port is to be is already marked out. If we will walk inland a mile we will come to the rusting iron boilers of the S. S. Wateree which was lifted up by the gigantic tidal wave of 1868 and carried with all her astonished crew across the sands to this incredible location — a very literal 'ship of the desert.' Near by are the deep crevasses into which the terrified people, fleeing from the wave, stumbled and were swallowed up, horses and all. All that is past history, and oil tanks and railroad tracks remind us that to-day Arica is a modern and a busy place, with the hope that the cataclysms of nature as well as those of man may have found surcease for a little while.

As we leave Arica we pass men in small boats harpooning swordfish — specimens of which frequently reach five hundred pounds. Often the harpooned fish tows men and boats far out to sea, although some of the fishermen attach

their harpoon ropes to floating kegs, and, after the chase is over, go out and gather up kegs and ropes, harpoons and booty. The swordfish appears on the ship's table next day in juicy steaks under the name of abarcaroa, and proves that Georgia's Banks have no monopoly on this delicacy.

And now the mountains become rosy and green, stained by the softening light, and by the rich deposits in the soil. For we are approaching the nitrate and copper region, the treasury of Chile. And where is nitrate found in such desert country? And how is it mined in this fantastic land of waterless cliff, girt by a sea so deep that no foam curdles along the edge? Look at the face of yonder precipice. It is the color of sand — and apparently drops without a break from summit to sea. But strain your eyes, and you will see across the dizzying middle distance infinitesimal specks — sand-colored against sand. It might be a wasp's nest stuck upon that sheer wall. But no — you are looking at the town of Caleta Buena, where two thousand people live: some of them along the shore to handle the shipping, others halfway up the cliff to manage the elevators, and still others at the top to take care of the nitrates as they come in from the pampa — two hundred and fifty thousand tons yearly. Seven hundred and fifty meters above the fathomless ocean, manufacturing their water from the sea, this settlement, as extraordinary as that of the ancient cliff-dwellers, is our first sight of that nitrate industry whose tax brings to the coffers of Chile more than a third of the federal revenue. The cliff becomes beige between the deep blue of the ocean and the pale blue of the sky. Caleta Buena dissolves into the background. Strain as we will,

and focus the binoculars upon it, it is gone, as an ash sinks into ash.

And now we approach the harbor of Iquique, which, on May 21, 1879, was the scene of the tremendous naval battle between young Arturo Prat, blockading the port with the Esmeralda and Covodonga, and the Peruvian ironclads Huascar and Independencia under Admiral Grau. The fame of these two brave men and their vessels is sounded so frequently in Chilean and Peruvian history, their pictures figure so largely in the paintings of every museum, and their names are honored so fondly in the names of streets and plazas that even the most transitory traveler becomes familiar with them, and finds himself impressed and appalled by the fury of that conflict between two heroic countries.

Iquique is thought to mean 'fallen asleep by the way,' from the custom of the caravans of the Inca to rest here, and the name reminds us that it is these oases along the Chilean coast which made possible the early marches across the desert. Iquique, which is Chile's second largest nitrate port, is set in no such dizzying altitude as Caleta Buena, but ranged, as we expect a rational settlement to be, along the ground. To be sure automobiles creep like flies along the roads hewn out of the face of the reddened mountains. Trains follow their hairpin curves up and down and finally out between some cleft leaving a plume of smoke behind. But the houses themselves remain comfortably on the level coast, and as the boat comes to anchor in the port the inhabitants do not gaze forth as do those high prisoners of Caleta Buena, but come with en-

thusiasm for dinner and a dance on the ship. For Iquique is a jolly place as well as a model nitrate port. It has its clubhouses and golf courses, and if there is time while the boat is loading one can drive out into the hills to the plateau of Alto Hospico and see the Government-owned airport — one of the highest on the continent. Very convenient it is, the Chileans evidently think, to have airports and aviation fields so high above the sea. Although they may have auxiliary ones on the coast, in case of war a landing station a few thousand feet above the enemy has its advantages.

And while we are watching the automobiles twist and turn about the trails, and watching, too, the moon come out in tranquil radiance over the tops of the mountains, thousands of bags of nitrate are being lifted into our hold, and into the holds of half a dozen other waiting vessels. For this odorless, innocuous-looking powder is an essential in the manufacturing of explosives, chemicals, and dyestuffs, and about one third of the annual export to the United States is used for these purposes. And, as if to counteract its destructive activities, the remaining two thirds are used in the peaceful science of agriculture, partly in the form of nitrate of soda and partly in the form of mixed fertilizers. It even affects the clothing industries, for cotton grown on land fertilized by nitrate matures rapidly enough to get ahead of the boll weevil. No wonder the United States is glad enough to import yearly thirty-six million dollars' worth of this invaluable material.

Just what is nitrate of soda? Theories differ. Darwin believed it was a substance formed from bacterial organ-

isms. Other scientists believe it to be the original deposits of guano. Others that it is the result of volcanic action, and still others that it is created by the decomposition of fish and seaweed in the ocean bed and raised to the surface by either gradual or cataclysmic processes.

In any case, Chile is the only country on the globe in which this precious commodity is found in workable quantities. Although 1930 is the centenary year of the export of nitrates, its ultimate reserves are placed at about two hundred million tons, so we need not worry about its exhaustion for several centuries. And in the meanwhile it furnishes work directly or indirectly to a hundred thousand workmen, enables Chile to buy a large proportion of the foreign products which she needs, provides for payment of her foreign debt and amortization of the principal. It furnishes more than one third of the revenues for carrying on the government.

This useful commodity is not difficult to mine. The principal layers of caliche — as the stony mass of clay, sand, and nitrate deposits and other soluble salts is called — lie about three feet below the surface of the ground in thin irregular patches which permit open and odorless cut mining. The surface is broken up, usually by dynamite; steam or electric shovels remove the earth and extract the caliche; and the raw material thus mined is transported to a central refining plant. Here it is crushed and then leached in huge evaporating pans. The nitrate is then recovered, and the crystals dried and packed in sacks.

While the Chilean Government keeps a control of the nitrate industry, and receives an export tax of about

twelve dollars on every metric ton, the operation is entirely in private hands, and American capital represents about ten per cent of the total engaged in the nitrate industry. Iodine, which is a by-product of nitrate, finds its chief markets in the United States, England, and Germany.

Although this coast is so long, those who travel up and down with any frequency get to know each other and have friends at all the ports. So while the traveler to whom this is the first trip may not go ashore at each stop, the commuters, so to speak, put in the time while the boat is loading to play golf at Iquique, have a round or two of tennis at Tocopilla, and lunch or tea with friends in Antofagasta, which is not such a bad way to travel, after all. Tocopilla claims that its golf course is the finest in Northern Chile, which is all right as soon as one is accustomed to a golf course without a blade of grass.

Tocopilla, with its low roofs and straight roadways and Yugo-Slav names, and its jagged little guano island like a large piece of rock candy, looks uninteresting enough from the deck. It is a copper as well as a nitrate port, and the power station set in its watered garden down near the shore is the largest one south of the United States. All the water used for the boilers and plant is condensed from sea water, and the oil used is brought down from Mexico, as the Talara oil is of too high a grade. Thus ships carrying South American oil to North America cross others bringing North American oil to South America. Power is sent by wire from Tocopilla to Chuquicamata, eighty-five miles away. Here lie the largest known copper deposits in the world and from them are mined over a hundred thousand

tons yearly. Should we take one of those zigzagging roads up the cliff to Chuquicamata we would find not only the mines themselves, but eighteen thousand people living in houses by no means unhomelike, with pianos and automobiles. Every one manages to have a good time, to make money and to save it, and to send the children back to the States to school. There is no verdure, to be sure, but the soil is brilliant with copper dyes, and sunrise and sunset offer an ephemeral bloom. One can fly from Chuquicamata to Antofagasta — one hundred and sixty-five miles — and looking down see the cattle being driven up from Salta in the Argentine. Their front hoofs are shod for their long journey and they have rested by the water holes on the eastern slope of the Andes, so they will be in good condition by the time they reach their Chilean destination. He might see, too, looking down, the Andean salt lakes and marshes, with their immense flamingo colony — not pink like the tropical flamingos, but gray and white and scarlet. Here, too, are mountain ostriches, so precisely the color of the sand that when they bury their heads they are indeed as invisible as they fondly think they are.

At Antofagasta, originally belonging to Bolivia and lost by her to Chile in 1901, Chile widens out to its fullest extent — two hundred and fifty miles. This is the metropolis of the great Atacama Desert — that ancient sea bed lifted by some convulsion of nature, and now lying with its petrified shells, stone lizards and fishes and molluscs and pulverized sea creatures sparkling under the blazing sun. Its masses of pumice, cast up by volcanic spasms, its rocks stained with iron and copper, its crevices white with

salt and its slopes of reddish sand, quartz, feldspath, and mica blend into a scene of glittering aridity.

At Antofagasta the copper begins to come aboard the waiting ships in good earnest. Bars that look like gigantic sticks of sealing wax and weigh two hundred and thirty pounds each, slabs, or blister copper as it is called, weighing three hundred and ten pounds, swing rhythmically through the air and land with a clatter in the waiting hold. The first is pure copper; the latter will be refined for its gold and silver content. Copper ore, too, looking like a pile of ashes, is being shoveled on some of the ships. For Chile, until 1880 the largest copper-producing country in the world is still the second, since the United States comes first. Many English companies prefer to work the mines in South Africa because of legal and financial stability, and so it is United States capital which controls ninety per cent of the Chilean industry. It is the largest North American investment in South America.

The electrical era gave an impetus to copper mining all over the world, and improved methods have increased the total production. A few decades ago many small companies exploited superficial ore with a high percentage content of copper. To-day about seventy per cent of the total copper produced is made by treating very low grade ores of one or two per cent. Since such exploitation is possible only on a gigantic scale, the future obviously belongs to the big concerns with plenty of capital. Such concerns are Chuquicamata, Potrerillos, and El Teniente, and from these three comes ninety per cent of the Chilean copper to-day. While we pass the ports of the two former, the

Braden Mines at El Teniente, operated by the Kennecott Copper Corporation, are fifty miles southeast of Santiago. This vast enterprise, scattered between the coast and Andean ranges, supports a population of about twelve thousand. An underground electric railway connects it with its main concentrating plant at Sewall, two miles west of the mine, and a six-mile aërial tramway runs to the smelter at Caletones. The copper is shipped through San Antonio — that harbor whose natural advantages, supplemented by stone breakwaters and framed in its green hills, so threatened Valparaiso's prestige that it had to be made into a second-class port.

Antofagasta is large enough to hold ships for the better part of a day, so there is plenty of time to go ashore and walk or drive through the town. Or best of all, to leave the town and walk in the dry tonic air along the shore toward the barracks and the golf club, passing schools where the children are singing, fields where the soldiers are drilling, the race track, and the polo field. It is desert in Antofagasta, as elsewhere in this region, and any rain that may happen to fall causes only consternation, because it may wet the precious nitrate, bagged — in jute bags imported from India — and ready to be exported. An inch of rainfall in twenty years is considered an average. Some of the precious water piped from the hills four hundred kilometers away is used to keep the trees and shrubs green in the long Alameda and to make flower gardens possible for the more favored ones. Antofagasta is a cosmopolitan place, as we realize on seeing the clock tower given by the British colony, the bandstand given by the Yugo-Slavs,

the statue by the Spanish residents. The Germans, too, have presented their adopted home with a statue near the market.

And now the smaller ports follow each other in rapid succession and at each one an engineer from the United States who, with his family, has been taking his four months' vacation back in Vermont or Michigan, says good-bye to his acquaintances on the steamer and starts back for his home in one of those mining settlements high back upon the pampas. Invariably these men direct their faces toward the settlement which will claim them for three years more, with eagerness. There is something about the bracing air and the sense of opportunity which stimulates them; and their wives, too, seem very ready to return to the verandaed, stuccoed houses with running water and electric lights, with vacuum cleaners and electric stoves, and perhaps a cherished patch of cosmos, coreopsis, stocks, and candytuft. That languid discontent so often noticed among women living in the tropics is refreshingly absent.

At Barquito, the town of the Chilean Copper Corporation, oil from San Pedro, California, is burning in a power house which might have been lifted bodily from the most advanced models in Pittsburgh. Power will soon be transmitted to Potrerillos, ninety-three miles away. The gravely squatting pelicans constitute themselves a reception committee and the seals frisk about in the waves, their backs like glass in the glinting sunshine.

A few miles out from Barquito is the old town of Chañaral, with its plaza and bits of struggling greenery.

Some of the children are playing basket-ball in the school yard and others are concentrating on a great wall map which indicates 'Lago Michigan, Nueva York,' and other peculiar places in 'Los Estados Unidos.'

It is not until we reach Coquimbo that we begin to see genuine greenness and sizable green trees. For here begins a change of the climate and coast scenery which has lasted for two thousand miles. Rains are not frequent in Coquimbo, but they occur often enough to keep the pleasant valleys of the province delicious with fig trees, olives, and pomegranates. The fruit and the fresh climate — never warm, never cold — early attracted the pirates who roamed up and down the Chilean coast, and Drake and Hawkins, Sharp and Davis all took a whack at the place. La Serena, the capital, which was the second city established in Chile, rises amid its church steeples and groves upon an island, and legend has it that it 'was not destroyed by the Indians in 1548, nor rebuilt by Francisco de Aguirre in 1549, but is the same original town under the power of enchantment, and only visible, like all enchanted places, on Good Friday.'

From Coquimbo come sweet singing canaries, healthy because bred and reared in the open air, and, if one wishes weightier export, here is the first iron we have encountered in Chile. For forty miles north are the Tofo Iron Mines, developed and operated by the Bethlehem Chile Iron Mines Company, a subsidiary of the Bethlehem Steel Company — and the only ones developed in Chile at present. The ore, which is of high grade, runs over sixty-five per cent in iron and is low in sulphur. It is sent from

Tofo to the port of Cruz Grande by an electric railway on which the loaded cars generate part of the force that returns the empty cars to the mines. At Cruz Grande the ore is loaded directly into steamers which carry it to Sparrows Point, Maryland, and other ports near New York.

And thus it is that this apparently sterile coast is one of the most valuable and interesting sections of Chile. No flowers or fruits, no vegetables or yellow grain spring from its soil. But in other distant lands fertile crops, varicolored dye stuffs and ten thousand electric brilliancies owe their life to the nitrate and copper of this unwatered coast.

CHAPTER XVI

THE LAST FRONTIER

People from the ship go on shore and order a drink at the local hotel. People from shore come on board and order a drink at the ship's bar — which, after all, comprises the general theory of recreation and hospitality the world over. Whether the order is given in halting Spanish or in broken English, it is all the same to the Japanese or Indian waiter who is indifferent to either, or to the German barkeeper who is quick to understand both. Dice and cocktails, being shaken in their respective containers, but in rhythmical unison, fill the room with convivial clatter, and happy the traveler who is able to sluff off his raucous Americanitis or his timid provincialism, and sink inconspicuously into the smoke-softened scene.

For what faces one sees in these small hotels and bars in these seaport towns! The lined faces of men who said good-bye to home in the heyday of youth, thirty or forty years ago, to seek adventure in the cities of gold and mountains of silver in the New World; faces of men who, as has been tactfully phrased, left their country for their country's good; faces ravaged by the habits and climate of the tropics... The ruddy complexion of the rancher in town for brief business... the steady eyes of an engineer, going back to his mine on the high desert, with the tenaciously held purpose of making good and saving money. Conrad's exotic and extravagant types pale into unreality as fiction always fades before fact.

For men dependent upon permanent ties in the familiar places of their birth, such existence is exile. For men who quicken in casual contact, and who flourish best lifted out of a continuity of old association, this is freedom — this is life.

CHAPTER XVII

VALPARAISO AND THE MEN WHO MADE IT

The personality of a place, like the personality of a man, is not commensurate with his physical characteristics. Valparaiso is not the largest or the oldest or the most picturesque of cities. And yet it takes its place among the great seaports of the world. It is a famous town, a virile town, a sailors' and a merchants' town. To go to Valparaiso is to go to one of the significant spots of the globe. And this is not wholly due to its geographical position. It is due as much to that genuineness which is personality in either a person or a place.

Valparaiso has not been especially favored by nature. To be sure her bay is large — two and a half miles wide — and affords the most important harbor in all of Chile's twenty-six hundred miles of seaboard. And to be sure the nineteen bluffs that curve around the bay are commanding enough to have been selected by that most discriminating of artists, Whistler, as a subject for painting. But the water of the bay is so deep that anchorage is impossible in certain cases, and the building of proper breakwaters is being carried on with enormous difficulty and expense. Although much of the loading and unloading must be done by lighters, and although the storms peculiar to the harbor send vessels scuttling out to sea to escape them, neither of these things seems to affect the volume of briskly executed business. Passenger vessels and freighters from all over the

world steam in and out between Points Ancon and Angeles, and since this is a naval base as well, Chile's Naval Academy, founded in 1818, stands conspicuously on the hill of Playa Ancha, with cadets in smart blue uniforms dotting the scene with animation and color.

A city built on varying levels is always interesting, and Valparaiso has developed according to topography. The water-front curves around the bay, protected by a stone and concrete sea wall; the business section runs through the low lying level section behind, while above, the hillsides and hilltops are closely set with houses. Suburbs and parks extend beyond the city along the shore.

While there is a tradition that Valparaiso received its name from the first sailors who saw it, and to whom the green trees seemed indeed a Vale of Paradise, after the long arid coast, it is probable that Juan de Saavedra, who founded the city in 1536, named it for his birthplace in Spain — where there are, as a matter of fact, several Valparaisos. During the Colonial Period — from 1544 to 1810 — it was referred to merely as the Port of Santiago.

Valparaiso had a hard time getting a foothold as a permanent settlement. As soon as it collected any valuables the pirates would swoop down upon it. As early as 1578 Sir Francis Drake arrived, as was his custom, with a splendid squadron — with silver table service, musicians, and gorgeous furniture, in order to impress the wretched little village he was about to sack, with the civilization of his native land. The Dutch corsairs in three separate bombardments attacked the infant port. Visitors even more devastating in the form of earthquakes shook it five

VALPARAISO

times, and in 1866 the Spaniards under Admiral Nuñez reduced the lower part of the city to ruins.

But there is little to remind us of these disasters in the present energetic metropolis with its banks and shops and rotary club and electric signs. Although we see an occasional donkey with rawhide panniers driven by a man in a poncho, although trucks bearing bags of wheat recall that in the days of '49 Valparaiso sent flour to San Francisco, yet as a whole the scene is very like that of any North American or European city of similar size and situation. It provides all the cheerful equipment of a modern metropolis: courts for the wrong-doer, hospitals for the sick, churches for the distressed. Although it is chilly in the season which is our summer it is not cold enough to kill the palm trees in the plazas or to make it necessary to take in the bird cages and potted, blooming plants which brighten the balconies.

It is easy to make a tour of Valparaiso, for double-decker buses are many, and although it is not fashionable to clamber up to the top, where the fare is less and the view is better, yet the stranger who wants to look around will abjure fashion in this instance. The conductors are women, with business-like hats, but retaining a touch of femininity in the lace upon their white aprons.

The bus presses through crowded streets, for people from all the neighboring region are thronging the shops and business houses. One hears the English of England everywhere, since the British impress has been strong upon the city from before the days when the British warships in the bay served as banks, receiving deposits of bar silver at an

interest of two per cent. While there are Germans and Yugo-Slavs in appreciable numbers, still the names of the streets — Prat and Cochrane and O'Reilly — sound very home-like. Pedro Montt Avenue, which was once a race-track for mule drivers and is now a handsome boulevard, was named for the Chilean President who helped rebuild the city after the earthquake of 1906. Monumento Wheelright commemorates that Massachusetts man who introduced the first steamship line along the West Coast — two-paddle-wheel steamers, which first chugged from here to Callao, and later as far as Panama. He also promoted the telegraph lines, gas lighting, and water systems. Banco Edwards recalls the name of Don Augustin Edwards, whose detailed and delightful histories of Chile are studied by all writers and referred to by all wise travelers. These familiar names, and the fact that, since we are almost directly south of New York, we have not had to change our watches, make Valparaiso seem more friendly than foreign.

After a tour of the lower city we may get to the upper by auto or by foot, or by one of the several electric lifts which are so plainly visible from the boat. These utilitarian contrivances lack the grace we always hope to find in a hill city, but they do their work with expedition and cheapness, and raise and lower many thousands of passengers in a day. Like the buses, they, too, are managed by women. It is on this upper level that the picturesque old houses and twisting roads still cling, and from it that one looks out upon a panorama of the famous harbor, tenanted with steamers and sailing craft: with great vessels and small

passing in and out between Capes de Piedra and Angeles as they have passed in and out of stories of the sea for hundreds of years.

What storms have riven and torn this water lying so placidly below us in the sunshine! The largest sailing ship in the world, the Potosí, was wrecked near Miramar, and only recently, when excavating for the Anglo-South-American Bank, the remains of old sailing vessels that had been tossed inland years ago were discovered. For Chile is the only genuinely maritime nation in South America. She was the first to use the magazine rifle in actual warfare, the first torpedo was used by her, and she was present in the first naval engagement in the Great War. Now her growing merchant marine and English-trained navy offer opportunity for ambitious youth, of which she has no lack.

It is quite suitable that such a port with such a history should have a handsome naval club, and as we find our way back to the lower city — after a swift moment's drop in the lift — we may perhaps step inside the formal portals of this building, near the fashionable Victoria Plaza.

And here we shall see a portrait of Cochrane, with his long fair English face — Thomas, Lord Cochrane, Earl of Dundonald, who after the death of Nelson was the most notable naval commander in England's chapter of glory. This roving daredevil had been expelled from the British navy for taking upon himself the blame of a crime committed by a friend who confessed on his death-bed. But he had no intention of letting any such incident check his career. During the Peninsular War he had kept ten thou-

sand French soldiers and the whole coast from Toulon to Barcelona on the qui vive, and when — 'a kind of destroying angel with a limited income and a turn for politics,' as Fortescue describes him — he appeared upon the shores of Chile, that country treated him a good deal better than his own had done. He threw himself into the little nation's struggle for independence, and in two and a half whirlwind years he succeeded in destroying every ship in the Spanish navy on the coast, in completely dominating the Pacific, and in freeing both Chile and Peru. Reckless and resourceful and of inspiring personal magnetism, Chile does well to honor El Almirante Cochrane, and hang his portraits and pictures of his fighting frigate, the Esmeralda, upon the walls of her naval club.

Bernardo O'Higgins also looks down at us from these walls, his face rounder and more Latin in coloring than that of Cochrane, since the blood of a Chilean mother flowed in his veins. His father, Don Ambrosio O'Higgins, who as a barefooted boy in Ballenary County in Ireland used to run errands for the Countess of Bective, died at eighty the Marquis of Osorno, and Baron of Ballenar, Governor of Chile and Viceroy of Peru, which proves that all poor boys who become famous are not confined to the movie screen. Don Ambrosio, who came from Ireland to Chile as an engineer's draughtsman, proved himself an efficient engineer when he built the stone huts on the Upsallata Road, which are still used to shelter travelers and their mules crossing the Andes and can still be seen, after over a hundred and fifty years of service, from the train windows. A man of justice and common-sense, tact

and humanity, he distinguished himself as a soldier, administrator, and diplomat, and although he never learned to speak Spanish well, his knowledge of the country and his understanding of the aborigines did much to improve the relationship between invaded and invader, and his wise and creative energy was felt throughout all Chile. His illegitimate son, Bernardo, followed in the steps of his illustrious sire, and ultimately performed on land the same services for Chile that Cochrane was performing on sea. He became the first Dictator and then the first President of Chile, a wise and kindly ruler, whose forced resignation was a greater disaster for the new republic than for himself. It was he who, standing upon the heights of Valparaiso where we stood a little while ago, watched the sailing of the first National Squadron against the transports of Spain, and exclaimed, 'On those four planks depend the independence of America!' — words that are duly learned by every Chilean school child.

Arturo Prat, hero of the War of the Pacific, is also honored here, as well as in the statue at the edge of the harbor. Although he was a young man when he met his death in the harbor of Iquique, his beard is of the kind that made us feel, when we were children, that Stonewall Jackson, who was not forty years old when he died, was venerable as Moses.

Arturo Prat... was it ever Arthur Pratt? And could Orellana have been O'Reilly? But whatever the derivation of such puzzlingly Latinized names, Chile has always had the knack of attracting able and interesting personalities to her, and the greater knack of retaining their allegiance.

Even so long ago as 1533 we read of Francisco de Aguirre leaving Spain for America, and bringing with him for company his son who was six years old. History records Aguirre's triumphs and honors but tells us nothing of the thoughts of that six-year-old spectator of the Conquest. And it only briefly mentions that later, when Aguirre was Governor of Tucuman, his wife and other children came out from Spain to join him, after a separation of twenty-three years. Old-fashioned chronicles took little heed of such trifling personal matters, and it is only by diligence that the student of to-day unearths them, and yet it is these intimate events that revivify for us periods and people who have been long dead.

And thus, since earliest times, Chile has developed an allegiance in the hearts of her native and adopted children. The Germans in their tidy and prosperous colony in the south may sing a little sentimentally over their excellent beer of 'Die Wacht am Rhein.' But they do not return to the Fatherland. Or, if they do, they hurry back as soon as possible to their vineyards and farms in sunny southern Chile. The founders of the national trade were Britishers who became Chileans, and to-day, after one generation, the English find themselves naturalized citizens, assisted doubtless by compulsory military service, under the direction, it may be added, of German officers.

There was, however, one man who, after a prolonged residence in Chile, took the first possible opportunity to get away and never showed the slightest inclination to return. In 1704 a sailor was left upon an island about four hundred miles west of Valparaiso, on the other side of the

Humboldt Current — an island shaped like a sickle moon, twelve miles by seven, whose rock masses rose out of the sea, opening into only one landing place. There are three islands in what is called the Juan Fernandez group, named for a sailor who discovered them in 1574. Más a Fuéra is rich in fisheries, springs, waterfalls, and wild goats. Santa Clara is of no value whatever. But Más a Tierra, rich in vegetation and wild fruits, deliciously fanned by cool breezes, hides a cave thirty feet long with pockets scooped out of its walls. It is precisely the kind of cave to satisfy the dreams of a small boy, and it has satisfied the dreams of many for over two centuries.

For it was in this very cave that a man, who had been born in Ireland, and run away to sea, and had, after various adventures, been marooned, lived for four years and four months in complete solitude, until a passing boat, seeing his signal fire, rescued him and took him back to England. Here he died fourteen years later, a lieutenant of the British Navy. But before he died he told the story of those four years to Defoe, and 'Robinson Crusoe' is still the favorite book of childhood in every country in the world. Some say that after Alexander Selkirk, or Selcraig, returned to his native village, he built a cave in his father's garden, and here he used to shut himself up and dream of Más a Tierra.

There is a marble tablet to his memory set against the rocks, for although Más a Tierra has been for centuries a place of refuge for hermits, navigators, and mariners, yet its fame rests upon the name of one man only — Robinson Crusoe. The Juan Fernández Islands, with their soft

tropical verdure and bold capes, are within a practicable excursion distance from Valparaiso, and every year increasing numbers of visitors go to them. But Más a Tierra is known to countless thousands of boys and girls who have never been a hundred miles from home, but who pore over certain well-thumbed pages in Italy and Arabia, in Germany and Russia, in China, Japan, and Spain.

All South America, having derived its culinary standards from Latin Europe, has better food and cooking than the United States and Canada, which derived theirs from England. But excellent as the food is everywhere, perhaps it reaches its climax in Chile. The game and fish and crustaceans — some of the lobsters being brought from those same Juan Fernández Islands — the fruits, melons, and vegetables are incomparable. As for Chilean wines, they have been the country's pride ever since the days when Drake found them good enough to carry away three thousand jars. For certain Chilean families sent to France long ago not only for seed but also for vineyard makers and tenders — a provision which is justified in the result. Chiloé, the queen island of the archipelago of the same name, where the Jesuit Fathers founded a settlement in 1609, is the home of the potato, which has always grown wild here, in as many as a hundred varieties. Chiloé, which was the last province held in Chile by Spain, bears a curious resemblance to Ireland, not only in its production and love of the potato and the pig, but in its mild and rainy climate. The people have the same sort of mythology of goblins, phantoms, and ghosts, mingled with the same superstitious adoration of the Virgin and the saints. Both

Irish and Chilotes are good fishermen and sailors, and both display great energy when they are removed from their native soil, which, on leaving, they immediately begin to idealize.

There is plenty to do in Valparaiso. Out at the fashionable seaside suburb of Viña del Mar, six miles away, is bathing and horse racing, polo, golf, and tennis. Halfway to Viña del Mar is the 'Recreo' where one may lose as much money as he pleases at roulette.

It is the custom in Chile to announce the departure of a train, not by blowing a whistle, but by the conductor's clapping his hands. And it is to this cheerful sound that we now set out for Santiago, a hundred and seventeen miles away.

The train passes along the aristocratic beaches of Viña del Mar, into forests of eucalyptus, by Marga-Marga, one time the summer home of the French artist Monvoisin, who, inspired by the clear atmospheric conditions there, helped to found Chilean art. In the valley of Limache, green with myrtle, cinnamon, and royal palms, it enters into the agricultural province of Aconcagua, irrigated by the river of the same name. This river is formed by the Rio Blanco and the Rio Colorado that bring down from the mountains the fertilizing silt which is the basis for the rich crops of alfalfa, corn, wheat, maize, hemp, fruit, and vegetables.

The scarped and angular peak of Aconcagua itself — the highest mountain in the Western Hemisphere rises from a profusion of vegetation into bare stratified rock of many colors, and then rears still higher into the world

of everlasting snows, its sides torn by torrents, and its crest wrapped in hurricanes and whirlwinds.

The Quillota Valley, beloved by Cochrane and Charles Darwin, and chosen by Pedro de Valdivia out of the whole country as the site for his haciendas, is the vineyard and fruit garden of Chile. We see cactus growing against the tiled adobe walls, men in red sashes mending the roads, round earthenware ovens outside the humbler houses. At La Calera the Northern Longitudinal Railroad starts out on its long course to Iquique, creeping over a thousand miles of desert. Near Pachacama stand groves of giant palms whose sap — called palm honey, ninety gallons to a tree — is the basis for a popular confection. At Llay-Llay the trains connect with the famous international line — the first to cross the Andes and give communication between Chile and Argentina.

And so, after three hours, the clean electrified cars draw into the glass-roofed station of Santiago, with its red-caps and taxis — into Santiago, the historic capital which at the time of the Boston tea party had a greater population than either Boston or Philadelphia, and which to-day stands fourth among the cities of South America, and contains about an eighth of the population of Chile.

CHAPTER XVIII

SANTIAGO, THE WHITE QUEEN OF CITIES

Despite the long winding and upward climb by which every one must approach Santiago, the capital city of Chile is not perched upon a mountain nor pinched into a valley nor dropped into a cañon. It lies spaciously extended over a fertile level plain, and around it in a mighty crescent circle the Cordilleras, their snowy tops kindling at sunset into running walls of fire. Like a Brunhilde the scene is held in spacious and exalted enchantment, which changes with each change of light and yet is immutable.

The effect of its sunny metropolis, with its animated office buildings, its embassies and plazas, its clubs and evenly arranged suburbs, high above the world and yet protected on all sides by a barrier of ice and snow, is brilliantly unique. And when the mountains sink into darkness, they still bulwark place and people, for on the peak of San Cristóbal a statue of the Virgin, transformed into a shaft of fire, sheds its light upon the sleeping plain.

A plateau so favored was early sought by the white man. In 1535 Diego de Almagro, gathering around him six hundred fiery adventurers from Panama, and fifteen thousand Indians from Cuzco, set out on a daredevil march to the south. With his short body and ugly face, Almagro, who was one of the most likable and generous of the Conquistadores, had the always disastrous fate of being a friend of Pizarro. In fact, he and Pizarro and Father Luque had

sworn a somewhat premature oath to divide the Peruvian Empire between them, and had sealed the contract by sharing a consecrated wafer. Pizarro had a flair for making contracts and bestowing grandiloquent titles. He made Father Luque 'Bishop of Tumbez, and Protector of the Indians of Peru,' and Bartolomé Ruíz 'Grand Pilot of the South Seas.' But he also had a flair for breaking contracts, and so as soon as there were any spoils to divide, he broke the one with Almagro. Thereupon the latter obtained a royal license to explore what is now Chile. In fact, it was, oddly enough, called Chile even then, some say from a Flemish word 'Kildinghe,' meaning cold, and some say from a Quichua word meaning 'earth's best.'

As was usual with the Spaniards, Almagro's object was gold. But as was not usual with them, after getting as far as Copiapó and the Rio Claro he was forced to give up the attempt, worsted by hunger, thirst, marches over ravines, deserts, and freezing mountain tops, and attacks of Indians quite unlike the gentle Quichuas of the North. He took what was left of his shattered band and trailed back to Peru, where he became engaged in civil war with Pizarro. Ultimately the latter had him murdered in his cell, where he was confined by illness. But Pizarro did not forget that Almagro had been a brave and generous friend of his youth. Or perhaps he did not forget the consecrated wafer. At all events he donned mourning and attended Almagro's funeral in the cathedral!

The next expedition into Chile was headed by Pedro de Valdivia four years later, under the battle cry of 'Saint Iago.' Valdivia not only knew how to handle his band of

cut-throats, and had progressive ideas of colonizing as well as conquering the country, but he was versed in the lighter accomplishments, for with him went Doña Inez de Suárez, 'bound to Valdivia by ties of love.' This lady, whom history has decided to pronounce both beautiful and brave, took her part in slashing off the heads of the Indians and binding up the wounds of the Spaniards. She was the first Spanish woman to set foot on Chilean soil, and after her career of love and war she married Rodrigo de Quiroga, Alcalde de Santiago and interim governor. After this she became extremely respectable, devoting her life to works of piety and building the church of La Merced. Another woman mentioned in the early chronicles was a nun, Isabel Arauso, who, disguised as a man, enlisted and fought in the conquest and doubtless inspired De Quincy's inimitable story of 'The Spanish Nun,' which, however confused it is as to geography, lacks nothing in excitement.

Out of the level plateau, which is part of the famed Central Valley, there rose an isolated hill. Not only its position in the center of perfectly flat ground, but the character of its basaltic rock, unlike any other in the vicinity, has been rather a puzzle to geologists. The Indians with mournful premonition had named the hill 'Huelen,' which means misfortune. Valdivia taking possession of it renamed it Cerro de Santa Lucía, and promptly turned it into a fortress. This was the beginning of the first permanent white settlement in Chile.

The stranger in Santiago needs no guide book to direct him to Cerro de Santa Lucía. Stepping out on the Alameda de las Delicias — which is quite impossible to miss,

since it is three miles long and over three hundred feet wide, with green gardens and statues — he sees directly at its head a most elaborate double stairway, sweeping around a pool and gardens, with other balustraded steps curving up out of it, to levels and heights above. The Chileans are very proud of this entrance. To conservative Northern eyes it may seem a trifle ornate. But one does not come to South America to view timid duplications of Boston Common. So up the stairs we mount, and once we are past the first level either the extreme showiness of the columned entrance grows less, or our taste becomes adjusted. Santa Lucía hill — for this sumptuous pile of cut stone, brick, cement, and natural rock is nothing less than Valdivia's old stronghold — is a tour de force of landscape architecture. Steps lead up to terraces; observation platforms hidden by skillful planting overhang the tiled plaza where children romp, an orchestra plays, and small tables are set out for refreshments. There are mossy walks, and secluded seats; statues, fountains, and pavilions. And each new level and each new turn reveals a varying vista of the white-crowned Cordilleras, of the glistening city or plain.

One can see all these riches of the world from Cerro de Santa Lucía, and, with the imagination quickened by the Statue of Valdivia himself, it is easy to run back four centuries and reconstruct the little checkerboard encampment that the conqueror laid out at the base of the hill. Some of the soldiers found wives to make the huts of mud and straw into homes. They brought fowls and domestic animals. And they laid out a primitive sort of unpaved central square to serve as a bull ring and place for tourneys,

and for the provision market. This was where the Plaza de Armas now presents its well-swept walks and band stand, and offers its plants and shrubs to the evening promenaders. And where the double-towered cathedral now stands Valdivia laid the corner-stone of the first small wooden church, dedicated to the Virgin. Four churches in succession have occupied the site. The present cathedral, which was begun in 1748 and finished more than half a century later, was designed by the Italian architect, Joaquin Toesca, to whom Santiago owes much. With the expulsion of the Jesuits in 1767 the cathedral was enriched by many of their ornaments and works of art. On the high altar of the church of San Francisco, one of the oldest in the city and partly destroyed by the earthquake of 1647, is still preserved the image of the Virgen del Socorro, which Valdivia carried on his saddle bow. It was to this Virgin that he dedicated the first institution in Santiago for the care of the sick, on the site of the present hospital of San Juan de Dios. Although the doctor does not seem to have followed the dictates of either Christianity or medicine in his refusal to attend Indians, on the ground that they 'only died when they wanted to,' nevertheless all these institutions were founded from motives of almost fanatical piety. For the whole occupation of South America was somewhat along the order of a crusade. This was partly due to the long wars which Spain had waged against the Mohammedans, during which the interests of the crown and the church became identical. Just as Granada fell, South America was discovered, peopled with non-Christians. Spain interpreted this as an indication of her mission: she

was first to conquer and then to convert — and she set about both operations with vigor.

The little settlement at the foot of Cerro de Santa Lucía passed through the vicissitudes common to all such settlements in those early days. Once when Valdivia was away it was nearly wiped out by six thousand attacking Araucanians. But the doughty warrior returned in time to save his fledgling city, and finding himself short of men sent word to Peru that gold had been discovered in the vicinity. This was not true, to be sure, but the report brought him plenty of recruits at once, and under the high-flown title of 'the very noble and loyal town of Santiago de la Nueva Estremadura,' it began to flourish.

Leaning over one of the parapets of Santa Lucía we can picture the tiny huddle of huts growing yearly larger and stronger, and we can picture the Araucanians being pushed further and further back from that luxuriant plain which had so long been theirs, and from that hill they had named Huelen or misfortune. It took over three centuries of frightful and more or less constant warfare to drive back the Araucanians. They have never been actually conquered. And if the conflict seemed unequal between the Spanish, who had horses and firearms and had been trained in the Flanders campaigns, and savages who had only arrows and spears, we must remember that at the beginning barely two hundred Spaniards opposed half a million Indians. So there was bravery enough on both sides.

Two of the Araucanian chiefs, Lautaro and Caupolitan, were sufficiently versed in strategy, as well as inspired by patriotism, to win many victories over the invaders. In

memory of their heroic qualities the Chileans have erected statues to them. It was in recognition of these same qualities that the Spaniards tortured them to death. For according to the logic of the times the more formidable the enemy the more severe his death penalty. So Valdivia should have felt flattered when he was finally captured and his heart was torn out and eaten, arrows soaked in his blood, and his bones made into fifes to hearten the Araucanian warriors. Some histories say he was killed by having molten lead poured down his throat, and others that his arms were sawed off with sea shells, roasted, and eaten before his eyes. At all events, there seems no doubt that he was honored by highly imaginative obsequies, as fitted a great soldier, statesman, and lover. He was the founder of Chile, and it remained very much as he left it for a hundred and fifty years.

We do not have to reconstruct the past entirely from memory. There are monuments and inscriptions set everywhere on Cerro de Santa Lucía. The special coat of arms which the King of Spain granted the growing city in 1552 is carved in the living stone above the Camino de las Niñas. The park has place for modern hospitalities as well, for in one of its subterranean chambers is housed the seismographical observatory of Chile.

It is proper that the very top of the spur should be crowned with a look-out, which gives a perfect cyclorama of the city and the plain, with the Cordillera de los Andes to the east, and the Cordillera de la Costa to the west, between us and the Pacific. And it is proper, too, that very near the top should be the mausoleum of the philanthropist

and historian, Benjamin Vicuña MacKenna, who both designed and gave to the city this treatment of the hill, then used as a potter's field and burying ground for non-Catholics and criminals. This public-spirited citizen was also responsible for the Parque Forestal, and the canalization of the Rio Mapoche. His statue is one of those in the Alameda.

At the beginning of the seventeenth century Santiago was a poor village of less than two hundred adobe houses, with straw roofs, set along narrow crooked streets. The real capital of Chile throughout the sixteenth century was Concepcíon, where the Spanish Governor Don Alonzo de Sotomayor had his official residence, and where was centered the military and political forces of the country. But in 1609 Santiago celebrated the commencement of its present prestige by a two-day fiesta which consumed three years' revenue, and from then on it sailed out upon the high seas of gay and elegant living. The families of wealth began to model their dress and manners after those of the court of Spain. The gentlemen curled their hair — with the aid of hot irons — into love locks. The ladies wore seductive costumes with skirts split in such a manner as to reveal their gold-embroidered or pearl-trimmed garters and silk stockings. There was as much discussion as to the proper and fashionable length of skirts as in the year of our Lord 1930. John Byron — grandfather of the poet — and George Vancouver, who has left his name and humane impress upon our own West Coast, both visited Santiago in those unfolding days and have left observant and appreciative descriptions of the balls lasting until three in

the morning, of the delicious drinks cooled with snow from the mountains, of the silver table service, the many mulatto servants, the bull fights, religious processions, and social festivals. The houses began to acquire crystal chandeliers and oil paintings; carved chairs with seats of tooled leather, and long windows with curtains of velvet and lace.

It is from this period that the present city has continued to develop. To be sure, there have been changes in taste. Although the many paseos and plazuelas have remained, the buildings facing them grew first from adobe cottages into the colonial type of house, full of character and appropriate to the climate. These were usually of a single story, with a pebbled patio enclosed by massive walls and tiled roofs. Then stucco and cement became the vogue; the pebbled patios were paved with wooden parquet blocks and roofed with glass. Now fashion is swinging back to what was best in Toesca's time. The public buildings are large and magnificent. The Palacio de la Moneda, the President's three-story residence, covers four acres! The sumptuous National Library can accommodate over three hundred thousand volumes and seven hundred readers. The Fine Arts Palace, Union Club, Stock Exchange, Bank of Chile, and the Anglo-South-American Bank are splendid affairs. The business blocks, not built very high in this land of earthquakes, are frequently intersected with glassed arcades. The shops are Parisian in their display windows. All the buildings in the city are very white, for there is little smoke to soil them, since neither the houses nor hotels have fires for heating —

as many an unacclimated visitor waiting for a nine o'clock Chilean dinner in August has reason to remember. While the private houses are less showily pretentious than in the plaster-stucco era, they are still rather more elaborate than similar houses in the United States. And why not — since here live diplomats from foreign countries, officials of rich copper mines, English bankers, German merchants, American financiers, and Chileans who own haciendas of thousands of fertile acres? Their marble-floored mansions, hung with Spanish mirrors and furnished in Spanish marquetry, are the scene of animated social life, which on Sundays and holidays brims over to the Club Hípico, with its green turf course unforgettable against a background of white mountains. To the visitor from sterner lands who has not become familiar with the South-American love of display, the Club Hípico is an astonishing palace of pleasure. At the annual ball eight to ten thousand people in fancy dress hold revelry under a woven canopy of lights, and gather in momentary groups about the tall outdoor braziers with their warming blaze. They are, like all South Americans, devotees of horse-racing, in a way difficult for North Americans to realize. Rich and poor alike know the pedigree of every animal and attend every race. The sport is conducted on as high and honorable a standard as in England and carried out with equal scrupulousness. The mad old days Don Agustin Edwards tells about, when a rider might seize his opponent's reins or even hit him over the head with his whip, are gone.

There are many clubs in the city and in its environs. The opera season waxes and wanes to the flash of jewels.

THE CLUB HÍPICO, SANTIAGO

In fact, it is easy for a snap judgment to pronounce that Santiago is devoted exclusively to gayety and fashion, to ease and elegance.

This, however, is far from true. The capital of Chile is seriously and intelligently concerned with its governmental duties, and only one period of revolution — from 1823 to 1830 — has interrupted her steady economic and political progress.

Chile is about twice as large as California, to which she is compared rather too frequently, and with a diversity of climate which produces a rich diversity of products. In the rainless north are the nitrate, the copper and iron deposits of which the export duties comprise a large per cent of her revenue. In the northern part of that great Central Valley — seven hundred miles long and a hundred miles wide, and annually fertilized by mountain water leaving a quarter of an inch of sediment — are immense vineyards producing over fifty million gallons of wine yearly. Here are feudal haciendas, where two and three generations live in mediæval self-containment and opulence. Horses and cattle are raised here, for the Chileans are skillful horse-breeders, having evolved, from the Arab which the early Spaniards brought over and from the Flamand of more recent importation, a type with the endurance of the former and the strength of the latter. Here are tree nurseries where trees acquire their growth in one third the time it takes with us. Here are orchards of vast extent, and since the Chilean seasons are the converse of ours, and since the voyage from Valparaiso to New York does not take as long as the one from California to

New York via the Canal, it is probable that the fruit industry will steadily increase in volume. Beside the many fruits we are familiar with — apples, oranges, lemons, figs, and peaches — there are many more whose acquaintance would be to our delight. Perhaps some day we may be eating green almonds in December, muskmelons as big as pumpkins in January, alligator pears in March, and ripe papayas in April, although any one who has tasted it knows that a papaya is acceptable at any season. The northern part of the Central Plain requires irrigation, but the southern part bears oats and wheat upon its broad, well-watered fields.

And beside these mineral and agricultural riches of its desert and valley, the southern part of Chile supports millions of sheep. Punta Arenas, her southernmost city, is built upon this industry. There are marble quarries, pink and white, jade and black, in southern Chile, and coal and iron. And there is a forest area as large as Ohio and Indiana. All countries have passed through a period of wastefully and stupidly destroying their forests, but it seems as if in the Spanish heart there was an actual antipathy to a tree. A denuded countryside is the mark of her occupation. But Chile is recognizing the trend of such destruction in time to check it. One fourth of her territory is in forest, and intelligent conservation and an intelligent policy are preserving this source of wealth.

Valuable as are all these natural endowments, even more valuable is the type of colonist that has been attracted by them. Thrifty Germans till the soil and run their lumber yards with machinery from the United States. The same

climate that hammered out the proud and stalwart Araucanians, who have never been conquered and who are now granted a place in the government of Chile, is hammering out a sturdy and homogeneous race of Chileans.

No wonder Chile is proud of herself. And no wonder that Santiago, the financial, political, and social center of the whole country, lifts her white buildings proudly into the clear air. She is perhaps a trifle assertive, but it is the assertion of vigorous youth with gifts in its hands and a promise upon its lips.

CHAPTER XIX

SANTIAGO TO BUENOS AIRES BY AIR

THERE are few bits of territory that have had more spectacular treatment than the boundary between Chile and Argentina. For centuries the frozen mountains had held up an effective barrier between the Atlantic and the Pacific, and the highest peak on the Western Hemisphere stood like a warning against the cold and hostile sky.

Only the humble mule had dared a trail across the icy peaks. And yet this remote mule trail was chosen as the stage for the most dramatic of statues. In 1903, after King Edward VII had assisted Chile and Argentina in settling their dispute over a boundary line affecting territory one third the size of Germany, the frontier cannon were cast into an heroic statue of Christ. Mules dragged this up the mountains until they reached an ascent which even they could not make, and then thousands of Chilean and Argentine soldiers and sailors lifted it by ropes to the Upsallata Pass. There it has stood ever since, twelve thousand feet above the sea. In the midwinter season the cross is sometimes bent double under the weight of the snows, and the figure completely hidden by them. The hand is outstretched in an eternal blessing of peace upon the two countries. On the granite pedestal is engraved in Spanish: 'May these mountains crumble into dust before the people of Argentina and Chile break the peace which they have sworn to maintain at the feet of Christ the Redeemer.'

So tremendously effective is this statue both in sentiment and setting that all the world knows of it.

But the mule trail, with its statue and the stone shelters built by Ambrosio O'Higgins, was fated to be superseded. In 1889 Chile and Argentina had started building a railway to connect their two capital cities — with two brothers, Juan and Mateo Clark, as its originators. But after ten years the work stopped. The tracks had been laid as far as either side of the Andes and then these terrible bastions gave pause to both engineers and financiers. It was W. R. Grace and Company that then took the contract and began to bore in from both sides. Not only the workmen but all the world listened for the click of the picks as the Chileans and Argentinians drew nearer and nearer together, until only a thin veil of rock hung between them. Late in 1910 a final charge of dynamite was set off, a two-mile tunnel was opened, and the adjoining countries were united.

And now instead of the long and arduous mule trail, travelers could cover the eight hundred and eighty-eight miles from the capital of Chile to the capital of Argentina in a brief thirty-seven hours — if not delayed by a snow storm.

Before the railroad there were three other well-recognized routes between the two southernmost republics. There was the tedious and dangerous way around the Horn, which all sailing vessels were and still are forced to take, since the narrow Straits of Magellan are impossible for any but steam craft. There was and still is the passage, a thousand miles shorter, through the Straits — that

river-like channel which Magellan discovered in 1520 — winding for three hundred and sixty-five miles between fjord and chasm, with glaciers slipping down into its waters, and with ephemeral rainbows arching over its eternal walls of ice. On one side lies Punta Arenas, the most southerly city in the world, now quite a blooming little metropolis with paved streets and electric lights, and adjoining it the blue mountains of Patagonia. On the other side of the Strait is Tierra del Fuego, with its rim of mountains surrounding grassy moorland, with its dense growth of ferns and mosses, its mighty forests of beech, and its flashing birds: Tierra del Fuego with its placer gold mines, its naked Indians, and its millions of sheep. This passage through the Straits of Magellan is of such thrilling grandeur that even now travelers who have time and taste for beauty prefer it to any land route. And beside these two there has always been and still is a little-known and ineffably lovely trail, by cart and automobile, by mule-back and boat, across the south of Chile. This district, with its bright lakes set in wooded shores, with its fertile German farms where white geese waddle in clear streams, and lush meadows lie serenely at the foot of snowy mountains, is little known in the United States, but the South Americans know and love it, and during the proper season, which is in our winter and their summer, it is frequently sought by them. Argentina has converted her side of this region into a national park, and Chile hopes soon to finish the automobile road which will make the trip possible by machine throughout the year.

But although each of these three routes offered attrac-

tion to the traveler, they all presented certain delays and difficulties. And so there was a mighty celebration indeed when the pioneer train ran between Santiago and Buenos Aires. Two days in comfort instead of weeks of inconvenience! It was entirely logical and right that the event of the first trans-Andean railway should be so heralded. But it shows how quickly the public taste for sensation becomes dulled, that in 1911 when Pedro Zanni flew across the Andes hardly any one even heard of the flight. And yet this was a memorable event in the history of man's conquest of space. And now the Pan-American Grace Airway maintains a weekly service between Santiago and Buenos Aires, making the trip in about nine hours. The planes carry twelve passengers and the fare is only thirty-eight dollars more than on the railway.

The history of the airplane in South America is unique. It concerns a vast continent dotted by hundreds and thousands of towns and villages that have never seen a wheeled vehicle of any kind. The majority of its millions of people travel on their own two feet when they want to get anywhere, or sit upon a donkey or a horse, or stand upon a river raft. In regions extending for thousands of square miles everything that is transported, from a hundred pounds of salt to a grand piano, is transported on the human back, on beasts of burden, or in crude canoes. There are sizeable cities whose centuries' old cobbled streets were virgin to a wheel until an imported automobile revealed the first, last, and only instance of a conveyance not one-man power or one-donkey power. Over these cities and hamlets now soars, almost daily, the air-

plane. Over desert oases where a score of families cluster together in their tiny adobe huts, over isolated valleys where a man's fortune is in a few orange trees, and over high plateaus where it is in a herd of sheep or llamas, the shadow of the airplane and the whirr of its engine two thousand feet above are a regular occurrence.

The huanaco — the undomesticated cousin of the llama — pauses in its browsing to stare up at the strange bird. The infinitesimal donkey, used to carrying his mistress and a baby or two and a load of alfalfa, gives a jubilant bray, perhaps foreseeing the day when his load will be lightened. The ox continues its trudging course — no airplane will plough the furrow or tread out the wheat for him, as it has been trodden out by the river's bank since the days of Pharaoh. And the Indians, instead of dying of fright at the incomprehensible apparition — as there were well-authenticated cases of their doing — look up and laugh with pleasure at the swift strange creature of the air.

For the South Americans have welcomed the airplane, fully, immediately, and unconditionally. In the many planes now threading their shuttles across the sky, seventy-five per cent of the passengers are South Americans. Never having played spectator to the experimental stage of its evolution, as we in the United States were forced to do, they have never felt fear in regard to it. It arrived in South America full fledged, so to speak, and they accepted it as naturally as the modern child accepts the automobile. And since the continent is not an arena for stunt flying, or endurance tests, or the trying out of new models, but merely for commercial flying, there is no rea-

son why the people should ever feel a passing doubt of its efficacy.

There is another reason for the phenomenal success of the airplane in South America. We in the United States are so used to fast and regular transportation by railroad and automobile, that we are not goaded to try an alternative, just because it is an alternative. We are reasonably sure of getting from New York to Chicago in twenty hours, safely and comfortably and in our accustomed manner. But in South America there are, as we have said, hundreds and hundreds of towns where there are no trains, no automobiles — not a cart, not a boat landing. It takes literally weeks to get from the interior on muleback — a distance that can be covered in a few hours by plane. Along both coasts, even between those ports with regular steamer service, it saves a tremendous amount of time. It has been a boon to the mail service, for owing to the lack of harbors, on the west coast particularly, steamers frequently have to anchor out in the roadstead and send the mail bags to shore by lighters. In rough weather it is sometimes impossible to dispatch the lighters, but such weather does not affect the planes.

Thus it is that the very factors which have for years hindered South America in her communication with the outside world and intercommunication within her own borders are working for the expansion and popularity of the airplane. Although the rate by air is approximately double the rate by water, business firms find it cheaper to send men by plane than by boat because of the saving in time. And when an emergency case is to be rushed to a

hospital, or a business man must meet an important engagement, minutes are more important than money.

And so we have in South America the singular phenomenon of a country which has passed from mule-back to airplane, from reed raft to hydroplane, with hardly a transition stage between; of children who have flown before they have driven; of Indians, who a few years ago were shooting their arrows at the 'big bird that flies' as it passed over their heads, now posing proudly before the camera with a hand resting on the wing of a plane.

The conditions attending this newest method of transportation in South America are peculiar. Unlike Europe where the distances are comparatively short, and unlike the United States where long stretches are relieved by places where a plane can refuel, the machines in certain areas over South America must be prepared for long unbroken flights. They must carry gasoline sufficient for these flights and provisions to last the passengers for several days in case of a forced landing. Taking off in thin air of elevated ports presents difficulties to heavier-than-air machines.

At the time of this writing New York and Buenos Aires are already connected by regular weekly service, making the trip in twelve days, and a tri-weekly seven-day service, for passengers, express, and mail, is expected. Besides these large companies, and the Government-owned lines for military and naval defense, there are individual enterprises for taxi service and sight-seeing. In the brief interval between the writing and the printing of this book all

of these agencies for air transportation will probably be enlarged and improved.[1]

Long pack trains still toil slowly over the Andes between Santiago and Buenos Aires, for freight goes more cheaply by muleback than by steam.

The train still penetrates its gorges and tunnels; it passes under overhanging cliffs: it skirts lakes and cañons, sometimes delayed by snow and often choked with dust from the pampas.

Vessels still plough their difficult and watery course around the end of the world.

And over them all the airplane soars. It looks down upon man and his dwellings, upon the mountains and their wild inhabitants, upon the rivers bounding territory still unexplored. Unlike the lowlier conveyances far below, it does not struggle through snow, nor tunnel through rock, nor labor through water, for man has risen above the elements that once chained him to the earth, and cleaves his swift and dustless way through the ether.

[1] The entire routes of the Pan-American Grace and its parent company, the Pan-American Airways, have a total mileage of more than thirteen thousand through the South American nations, the West Indies, and the Bahamas to Miami, where mails are transferred to domestic airlines for delivery in the United States and Canada.

The New York, Rio, and Buenos Aires Line, Inc., through a wholly owned subsidiary, holds a contract with the Argentine Government for the transport of air mail from the Argentine to the United States, and a contract with the Government of Uruguay for the transport of air mail from Uruguay to the United States. The mails from these two countries comprise over sixty-five per cent of the postal activity of South America.

CHAPTER XX

BUENOS AIRES: A MARCH OF POMP AND CIRCUMSTANCE

Almost at the end of the world, although not quite at the tip of South America, there is a city. Six thousand miles of ocean heave between it and New York and approximately the same number between it and Europe. In all the vast continent spreading north and south of it there is no other capital with which it can be compared. To seek a comparison it is necessary to recall the enormous substantiality of Berlin or the ponderousness of London. For Buenos Aires has none of the simplicity of Lima, none of the airiness of Santiago, none of the fantastic witchery of Rio de Janeiro.

Upon a perfectly flat plain beside a sluggish river it extends for seventy-two square miles in heavy impressiveness along its straight narrow streets and along its straight wide boulevards. Subways undermine it; gigantic public buildings adorn it — buildings which have passed a municipal commission of architects and usually bear the name of their own architect on the façade. Nothing has been spared in costliness of material or labor to make it indestructably grandiose. Although it has a history of four centuries there is little to remind one of the site chosen by Don Pedro de Mendoza in 1536, twice destroyed and depopulated, and finally rebuilt by Juan de Garay in 1580. Here and there is an old building, such as the sixteenth-

century cathedral, or the Church of Santo Domingo where the flags taken from Whitlocke's forces are preserved, or the one-story house where General Antonio González Balcarce, who won the first victory in the War for Independence, was born in 1775. But viewed in its entirety Buenos Aires is as new as Chicago, which it somewhat resembles in its ambition and wealth, and directly behind which it takes its place as the third largest city in the Western Hemisphere. Although the Argentinians are outnumbered seven to one by the other South Americans, they do half the business of the continent.

Further south than the tip of South Africa, this metropolis has reared its buildings of steel and stone, cut through its mile-long, hundred-foot-wide avenues to terminate in imposing vistas, arranged its parks and open squares and monuments quite as proudly and confidently as if it were in the heart of Europe. It is, briefly, one of the most striking phenomena in the creation of twentieth-century man.

How did this astonishing metropolis come into being? Who lives here and by what wealth is all this gorgeous showiness sustained? Why is the capital of the Argentine Republic so different from any other place we have seen or shall see in South America? Who chose a dull, damp plain and an artificial channel over a hundred miles long as an appropriate site for the greatest port of a great continent?

The obvious port for this region is Uruguay, with its perfect natural harbors, and its several hundred miles of navigable streams. But the Indians at Montevideo saw no reason for yielding up this beloved terrain to the white intruder, and resisted stubbornly, savagely, and persist-

ently. In January, 1536, when Don Pedro de Mendoza, with a thousand young men from noble Spanish families, sailed up the Rio de la Plata he did not pause at Montevideo, but continued on to the Boca, and going ashore there, selected a site for a city in the name of His Majesty, Don Carlos V of Spain, and gave the spot the astonishing appellation Ciudad de la Santísima Trinidad y Puerto de Santa María de Buenos Aires. And from this settlement has eventually evolved what is to-day the largest Latin city in the world after Paris.

A country larger than the United States east of the Mississippi sustains this capital, and one can see the process as clearly as an X-ray reveals nourishment being received into the human body. For along the wide cobbled streets down by the docks there moves a continual stream of wooden carts, each drawn by three or four horses. The carts are prodigious affairs on heavy wheels, and the draught animals are magnificent types of Belgian Percherons — great beasts in harnesses elaborately studded with brass. Within the high ornamented sides of the carts are piled bags, barrels, boxes, and bales. The sight and sound of these wagons have been a part of Buenos Aires for many years. Sir Woodbine Parish, British Minister to Buenos Aires in 1839, describes them, explaining that they were made in Tucumán of very hard wood, with high wheels to keep them out of the mud. The horses or oxen were harnessed at a distance from each other, so some of them could be on dry land while the others were making their way through swamps. In the days that Sir Woodbine Parish describes, a caravan of fourteen wagons usually

covered about fifteen miles a day. Each wagon carried a couple of tons and the price of hiring a caravan was five thousand dollars. They were usually absent about a year, six months being passed on the road and the remainder of the time in delays and waiting in Buenos Aires for a return load. A caravan required twenty-five men beside the conductor, and three relays of oxen beside the horses for the drivers.

The process to-day is not quite so quaint or cumbersome, but the high painted wagons flowing in from the hinterland of Argentina in an unceasing line, with their thousands and thousands of tons of produce, are one of the few picturesque survivals in a city which is practically as modern as one of our own. There could be no more graphic illustration of the country's prosperity.

For Buenos Aires does not exist, as its photographs too often make it appear, by the ornamentation of its buildings or the glitter of its shops. It is substantially founded upon a vast hinterland, with a range of climate from the torrid through the temperate to the frigid zones, and with a natural wealth which is practically inexhaustible.

What is in these great carts so endlessly creaking past us? Bales of wool and hides from a country which stands in the foremost rank in the world's production of cattle and sheep; bags of linseed from the largest flax-growing fields on the globe; cotton, tobacco, wine, wheat, beef, and barrels of quebracho for tanning leather. Quebracho means 'Break-ax' and refers to the hardness of the wood. To-day a single company is manufacturing a ton of quebracho extract every three minutes, enough to convert

thirty-three hides into sole leather for a thousand boot soles. Caterpillar tractors bring the quebracho trees to a central plant from the three-million-acre tract, and the land thus cleared is turned over to grazing.

The carts come creaking in and at the docks a crowd of vessels await them. Their holds are yawning wide, for electric cranes have just unloaded from them automobiles from the United States and France; lumber from Austria, Poland, and Canada; tons of paper from Germany and Finland; manufactured articles, textiles, steel, and tin plate. All these things are pouring into Buenos Aires every hour of the day in return for the products of her pampas. The land fills the carts with its riches and the water bears the vessels thus loaded to their distant destinations, and to such a point has water transportation been developed that it is actually cheaper to bring peaches to Buenos Aires from California than from Chile!

It is undoubtedly tiresome to endeavor to interpret Buenos Aires by means of figures, but that is precisely what the Argentinians do themselves. When they explain that the population of the city will be between two and three million in the 1930 census, and that the dome of Congress Hall looming against the sky weighs thirty thousand tons, they are unconsciously voicing the keynote of the place. Size, weight, wealth, and their display, in forms not tawdry but tremendously ornate — these are the things which distinguish the capital of the republic.

Every place, like every person, offers a standard by which it chooses to be judged and appreciated. If the visitor to Buenos Aires accepts the proffered one of

material achievement, he will find that the city more than fulfills its assertions of supremacy.

There are four places, each catering to a different human need, which any one who is seeking to understand this phenomenal place and its people will do well to visit. And the first one is the 'Prensa' — the newspaper which, having always been in the control of one wealthy family, has not had to cater to politics, and is recognized all over the world for its constructive and cosmopolitan tone. Bearing in mind our own utilitarian newspaper offices, we survey the Prensa with amazement. It is not that it occupies a whole seven-story block and contains all the most modern machinery and electrical plant, etc. Our newspaper offices do as much. But what would our editors think if they found themselves installed in lofty chambers with parquet floors, velvet and gold curtains, and hand-carved fireplaces? How would the readers of our daily sheets respond if our leading journals opened to them a suite of doctors' offices where medical and operating services, oculists' tests, etc., are given absolutely free of any charge? If it supported another office where they might obtain legal advice from able jurists without any fee? And if, in addition, it offered them a free law and reference library, a school of music, a concert and lecture hall, with chairs of crimson brocade and gilt, its gold-colored walls hung with genuine Gobelin tapestries? Those who think our American newspapers give a good deal for two cents have never stepped over the threshold of 'La Prensa.'

So much for the masses. To judge of the taste, and opportunity for displaying it, among the wealthy, we

naturally turn to the Jockey Club, with its entrance fee of three thousand dollars. Here the Latin love of lavish regality reaches its apogee. Among polished pillars of green onyx, with a balustrade of hand-carved walnut worth more than a hundred thousand dollars — forgive our again mentioning money, but even so it has been mentioned to us — hang Sorollas, Ziems, and Perraults. Here are imperial banquet halls, private dining-rooms, fencing-rooms, billiard-rooms, and gaming-rooms of every variety. A library of fifteen thousand volumes vies with a tiled cellar with eight hundred thousand bottles of champagne. Here is the kind of opulence we associate with rajahs and Arabian nights. Not in the least gaudy or meretricious, the Jockey Club is the epitome of material ostentation.

In the Colon Opera House the same gorgeousness is manipulated into an effect of subdued splendor. This building, which, ex-Secretary Colby remarked, 'would make the Metropolitan Opera House look like a hastily constructed theater in one of the rural towns of the Shubert Circuit,' occupies an entire square, with elevators carrying one directly from the porte-cochère to the boxes. The width of the seats and the width of the aisles and the skillful arrangement of entrances are all designed for supreme comfort. There are even boxes with iron grills in front of them so that people in mourning may sit in privacy. Since the seasons in Buenos Aires are the reverse of those in the United States and Europe, it is always possible to procure the best artists, so that the performances are quite equal to the setting.

If the living pass their moments of pleasure in such monumental edifices; if they transact their business in banks which are marvels of marble floors and coffered ceilings; if they live in city mansions which would shame European royalty, and in country villas of fifty rooms; if the women's Paris costumes reach them six months before they get to New York, thanks to the difference in seasons, and if the men would perish rather than promenade down Florida without a cane, it is not inconsistent that even in death they cherish the trappings of grandeur. And such indeed is the case. La Recoleta Cemetery, like the Paradise imagined by the Jews, is the final testimonial to a racial love of amassed richness. A fashionable part of the living city has been reserved for a hundred years for the fashionable dead. La Recoleta bears no resemblance whatever to churchyards or cemeteries as the North American knows them. It is a necropolis of polished black marble, of rose and white granite. Each separate mausoleum, with its bronze doors and stained-glass windows, stands complete, facing a well-laid-out street, precisely as a small city house might face an avenue. If we pause before any of the locked wrought-iron doors, we shall see inside a marble altar or mantel draped with finest and freshest linen and lace. Upon it burn oil lamps of gold or silver workmanship. There are newly cut flowers in the cases, oriental rugs on the mosaic floor and on the stairway that leads down to the room below, where, in carved coffins, lie the bodies of the departed. A bustling air of temporal housekeeping pervades the place. Men are polishing the brass trimming of the gates or washing the steps or wiping down the marble

walls. Women in black crêpe are replacing the embroidered window curtains with newly laundered ones, or rearranging the flowers. Nothing of dust or decay is here. Each expensive tomb and statue vies with its neighbors in its elaboration and in the meticulous care of its upkeep. The bronze memorial plaques show gentlemen in evening clothes and with well-brushed whiskers, for to have one's name and face so perpetuated at La Recoleta is the accepted ambition of all normally minded millionaires.

Fortunately for the visitor who has no desire to acquire a fifty-room house during his life, or a black marble mausoleum after his death, Buenos Aires offers more modest and interesting diversions. A visit to the showgrounds of the Rural Society of Argentina during May or September, when the exhibitions and competitions are usually held, is alone worth a trip to this far-away republic. Here are gathered thoroughbred horses of every breed, for the love of horses and horse-racing runs from the aristocrats who gamble half a million dollars on Sunday at the races down to the man on the street corner who does not go to any track at all. It has been said that there are over ten thousand thoroughbred race horses in the immediate vicinity of Palermo, where the Hipodromo Argentino is situated — a hippodrome of such voluptuousness that it would make a Roman emperor groan with envy and of such proportions that it can accommodate fifty thousand spectators. Beside this course at Palermo there are many lesser ones outside the city and in the provinces.

It is no wonder that in such an atmosphere lovers and breeders of horses flourish. Out at the show grounds of the

Rural Society there is a circle of prospective buyers about every paddock. Here are massive dappled Percherons with their tremendous necks beribboned and their powerful muscles moving like whipcord under their skins. Here are slim hunters, hackneys, polo ponies, Arabs — all of them gleaming and polished and expertly displayed.

The exposition is by no means confined to horseflesh. The monumental bulls, some of them snow white, are washed and curried and brushed with a lotion that makes them shine like lap dogs. As much as sixty-three thousand dollars has been paid for one bull, and there are hundreds of others that Europa would have been glad to leap upon, and that painters of that lady and her mount would most certainly have rejoiced to depict. There are sows as big as cows, boars as big as bulls, and bulls as big as houses. The sheep and rams are so heavy with wool that one wonders that their legs can hold up their weight. The snow-white rabbits appear, to our now reeling vision, like small calves, the turkeys with their iridescent feathers are colossal, and the peacocks, ducks, and geese are of ultimate perfection. Nowhere on the globe are there handsomer animals than here, and whether it is because the Argentinians value their livestock so highly, or hold the probity of their own countrymen so low, they trust the awarding of prizes only to judges imported from England! But the modishly dressed men and women, moving from pavilion to pen and to spectator stands, appear to be judges of no amateur ranking, as they appraise with expert eye and buy with open purse.

This pawing, crowing, bleating, and grunting array of

live creatures is much more enthralling than anything in the museums, but if one has not time to travel into the interior of the republic, but must gather his impressions of the whole country from a short stay in its capital, he should by all means take a look at the Agricultural Museum near the Exposition Grounds, and see with his own eyes the minerals, fruits, peanuts, cotton, and leaf tobacco. In the galleries are exhibits of wool, furs, sheepskins, feathers, leather, honey, beeswax, and silkworm cones. There are also Indian ponchos, and bed-covers, and various articles of national manufacture.

Furthermore, in a city so thoroughly modern, it is imperative that any one who wishes to comprehend anything of its history and background must go to the various other museums, for only here are the mementoes of the past preserved. In a certain one may be studied arms, maps, flags, and trophies of various wars. In another — the archæological — are musical instruments, weapons, and arts of the Indians of pre-Columbian days. The period of Spanish domination is made vivid in the National Museum by a charming collection of fans, combs, and furniture.

The most unusual museum, of course, and one that is famous throughout all the scientific world, is the one at La Plata, capital of the province of the same name, and an hour's train ride from Buenos Aires. Here are ranged skeletons of long extinct Mylodons and Megatheriums, gigantic mammals whose names and shapes remind us of a nursery book of the world: prehistoric monsters, reptiles, marine fauna, and mounted birds of South American origin. Collections of insects and nests showing the structure and

THE BUENOS AIRES BUILDING OF THE FIRST NATIONAL BANK OF BOSTON

habits present a complete biological cycle of life upon this earth from earliest times to the present. While this museum and its library are a special paradise for the paleontologist, the botanist, and the student of comparative osteology, they are fascinating to the layman.

Complete as are the types of furniture and jewels in the museums, such unattainable specimens merely serve to make the collector chafe. He longs for antique shops, and he may gratify his longing without difficulty. For there are plenty of crowded chambers where are offered for sale elegant old Spanish cabinets, the angles of their wood and the brightness of their gilt softened by years; carved wooden jewel boxes painted in jade, blue, and rose; engraved silver bowls for making maté, and silver straws to match them; images and bits of brocade. There are pawn shops, too, run by the Government, where long earrings and old-fashioned brooches reward the searcher.

Walking or driving about the city one discovers countless small parks adorned with admirable statues, with benches and flowers and shade trees. Palermo, the Central Park of the city, is alive with automobiles, horseback-riders, and pedestrians. Hundreds of different species of roses are cultivated in its Rosedal, and the Botanical Garden displays the representative flora of the whole world. Surveying these well-kept boulevards, it is amusing to recall that the paving of the streets in Buenos Aires was opposed by an early viceroy, the Marquis of Loreto. His first official reason against it was that he feared the houses would fall down from the shaking of their foundations by heavy carts passing over stone pavements, 'whilst another

and weighty objection, in his opinion, was the necessity it would entail upon the people to put iron tires on their cart wheels, and to shoe their horses, which, he observed, would cost them more than the animals themselves.' It is almost as difficult to realize that it is Buenos Aires which was thus considered as to realize that so short a time ago as 1847 Chicago had only one paved street — a short one paved with wooden blocks — no railroad, no telegraph, no gas, no sewer. The police force consisted of six men and one fire engine and the rickety unpainted frame shanties in which its ten thousand inhabitants found shelter were not even numbered.

Around Buenos Aires proper are country clubs and river-side resorts. To Tigre is a popular excursion, with its boating and fishing, swimming and shooting, regattas, launches, and yachts. The Hurlingham Club — the English Club — features polo, golf, and tennis. Some of the clubs are exclusively for the Germans, of which there are approximately six thousand; some are for the four thousand Americans; others are mixed in their membership.

CHAPTER XXI

ARGENTINA AND ITS PAMPAS

The people of the United States, who, despite their summer vacation tours, like droves of sardines, along the well-beaten paths of Europe, must still be called provincial, nowhere display this provinciality more than in their attitude toward South America.

Our average citizen is quite complacent in his conviction that South America is an amorphous mass of small, half-civilized countries, chiefly tenanted by monkeys, Negroes, and boa constrictors. It has never occurred to him that there is more difference between temperate Argentina and tropical Brazil than between Labrador and Florida — more, since the Argentinians and Brazilians do not speak the same language. In fact, there is more difference between the speech and customs of Argentina and Chile than between those of Canada and the United States. When we speak of Europe and Europeans we recognize that a Swede is not identical with a Swiss. And yet we continue to utter generalities about a continent which covers infinitely more territory and embraces infinitely greater variety of climate and culture than Scandinavia and Switzerland.

While this habit of 'lumping' all South America makes it impossible to understand her vast and heterogeneous assemblage of countries — some of which are greater than the United States — it is fatal when applied to Argentina,

which is entirely unlike any of the other republics. Not only does it differ climatically from them in having a larger area suitable for European civilization, but more than any of the others it is a slice of Latin Europe bodily transplanted. The indigenous racial elements such as characterize Peru and Bolivia are lacking here. The Negro who has so affected Brazil has not been favored either by climate or legislation. The peculiar strain of the Araucanian and Basque which has created the strong homogeniety of Chile is totally lacking. The alluvial plains or pampas of Argentina, extending north and south and west for hundreds of miles, and making her one of the most important agricultural centers of the world, have from the very first attracted European capital and immigration. This immigration has been predominantly Italian and Spanish. To-day Buenos Aires has more Italians than Rome, more Spaniards than Madrid. In one year a quarter of a million entered the country.

These newly arrived immigrants are received in hotels that can accommodate a thousand at a time, and which are protected by strictest sanitary and police regulations. They are transported free with their goods to any province where they wish to settle, and maintained there for ten days at the Government's expense. Even with this encouragement, and the opportunity for laborers on the pampas, twenty per cent of the population still clings to Buenos Aires. Since many are allied with European anarchistic and socialistic movements, there are the inevitable conditions of overcrowding, labor troubles, and strikes. One reason — and a logical one — which the immigrants

give for their reluctance to colonize is that eighty per cent of the cultivable land in Argentina is owned by estancieros, who control both the federal and provincial assemblies.

All of these things except the last sound familiar to our ears, and indeed many of the problems of Argentina are our problems, and her methods of meeting them are similar to our own.

This great and prosperous country, with a coast line equal to that between Key West, Florida, and Halifax, Nova Scotia, is ninth in the countries of the world in its amount of railroad mileage. (There is more railroad mileage within a radius of three hundred miles of Buenos Aires than in the whole state of Ohio.) Its primary, secondary, normal, and technical schools are comparable to our own. And as we travel about this mighty land, as we accept an invitation to dinner in a private home of forty rooms, in a family whose children have all been educated in Europe, we begin to comprehend something of the reason for our unpopularity here.

We begin to get some glimmering of why our sacred shibboleth, the Monroe Doctrine, promulgated a hundred and seven years ago when we were a weak nation and when Argentina was a comparatively insignificant one, should not be held sacrosanct by them any longer.

The Argentinians do not object to the original principles of President Monroe's declaration. They do not want, any more than we do, colonization by outside nations, or interference by European powers. But what they resent is the so-called Roosevelt corollary, which made the United States a constable over both American continents. It was

this corollary, with its declaration that 'flagrant cases of ... wrong-doing or impotence' might force the United States to the 'exercise of an international police power' in the Western Hemisphere, which is largely responsible for our armed presence in the Philippines, in China and Nicaragua, and the West Indies. It is also largely responsible for the bombardment of Vera Cruz in 1914, the expedition of Pershing into Mexico in 1916, and the occupation of Haiti in 1915 and of Santo Domingo in 1916.

The Argentinians have, very reasonably, inquired why, since there are continual new interpretations of the Monroe Doctrine, they should all be decided by the United States alone, and manipulated so as to be of advantage to her and to no one else. The same idea has occurred to certain thoughtful people in the United States. Professor Woolsey of Yale put himself on record with the statement that when the Monroe Doctrine 'oversteps the principles of self-defense, reasonably interpreted, the right disappears and the policy is questionable because it violates the rights of others.'

Fortunately for our strained relations with Latin America, our State Department has recently seen fit to publish officially a two-hundred-page memorandum on the subject, written by J. Reuben Clark, formerly Undersecretary of State, and, at the present writing, advisor to the American Embassy in Mexico. Mr. Clark declares plainly that the Roosevelt corollary was absolutely wrong. He furthermore points out that the Monroe Doctrine 'does not apply to purely inter-American relations.... Such arrangements

as the United States has made, for example, with Cuba, Santo Domingo, Haiti and Nicaragua are not within the doctrine as it was announced by Monroe.'

This clear and constructive statement is 'purely personal,' but the fact that the State Department should publish it officially indicates that the views in the memorandum are those which the State Department will presumably follow in the future. It is also to be noted that the year 1930 has been successful in developing machinery under which the United States agrees to submit to arbitration matters over which, in the past, she assumed the sole right to decide. This means that the probability of a conflict between the League of Nations and the Monroe Doctrine will be avoided.

The Monroe Doctrine having reached a reinterpretation which will be acceptable to Latin America as well as to ourselves, it is to be hoped that Pan-Americanism will reach a similarly happy understanding.

Just what is Pan-Americanism? Does the word, as Lord Bryce once inquired, describe a fact or merely convey an interesting aspiration? Upon what is based that vague assumption that because two vast continents use the same name — most unfortunately derived from an adventurer who never saw the one and did not discover the other — they are necessarily closely akin? This, of course, borders on the fantastic. South America has more in common in race, religion, language, and ideals with Latin Europe, from which she derives, than she has with us, who derive from Anglo-Saxon and Teutonic Europe. There are more travelers to her shores from Europe than from the United

States. South Americans are received more courteously and appreciatively in Europe than here.

It is not strange that Latin America should fear that Pan-Americanism will be interpreted, as was the Monroe Doctrine, not as an equal union of North, Central, and South American powers, but a sort of organization ruled by the United States. This fear was intensified when, at the sixth Pan-American Conference in Havana in 1928, rotation in the chairmanship of the Pan-American Union was proposed, so that its director should not always be a citizen of the United States. Governor Hughes adroitly evaded the issue by replying that the permanent chairmanship gave no undue authority. The fact that it was vested in the American Secretary of State was merely 'the best way of having some definite presiding officer at the meetings.' The climax came in the debate over the adoption of the resolution that no State should 'intervene in the internal affairs of the other.' Although thirteen Latin American States declared themselves in support of this non-interference resolution, Mr. Hughes managed to secure its postponement until the next conference which will meet at Montevideo. It is hoped that the same intelligent policy which we are now adopting in regard to the Monroe Doctrine will prevail in the interpretation of Pan-Americanism. This hope finds encouragement in the fact that Mr. Hughes and Mr. Kellogg refused the suggestion that the United States alone mediate the Chaco dispute between Bolivia and Paraguay, and voted for the establishment of an Inter-American Commission.

There are many ties, and there are genuine reciprocal

relations, between North and South America that are legitimate, and based upon a commerce that is advantageous to both, or upon individual congenialities that may exist anywhere, regardless of geography. That such commerce should increase in a century which such far-sighted statesmen as Earl Grey and Elihu Root have pronounced the 'century for South America,' is to be hoped. And it is increasing — not because we are making flowery speeches, or financing expeditions of 'good will,' but because we are mending our ways. We are no longer sending ignorant salesmen and vulgar consuls to represent us, but we are still suffering from those we sent in the past before we realized the importance, not only of South America's trade but of its respect. In Santiago de Chile they still describe with astonishment the dexterity with a toothpick displayed at a formal banquet by one of our leading diplomats.

A little less public and private stressing of the Monroe Doctrine and even of Pan-Americanism until we have cleared away the justifiable suspicions that both these slogans are excuses for 'yanqui imperialism' would help wonderfully in lessening the undeniable antagonism toward us and our methods in Argentina.

Another tactless fashion which has done more harm than many expensive official tours of 'good will' can counteract is that of continually drawing comparisons between the United States and South America — to the latter's disadvantage.

It is true that we are further advanced along certain lines than the South American Republics. We have had

forty-three years' head start over them in constitutional government. But if we compare Latin America with ourselves half a century ago, we will be forced to admit that she is in many ways far ahead of where we were. If our own lives are not long enough to make this comparison, we can turn to a few passages penned by the Prince of Journalists, who visited our shores in 1855. Charles Dickens presents this as a faithful picture of American life as he saw it at that time. It is the description of a New York boarding house. 'In the further region of this banqueting-hall was a stove, garnished on either side with a great brass spittoon. ... Before it, swinging himself in a rocking-chair, lounged a large gentleman with his hat on, who amused himself by spitting alternately into the spittoon on the right hand of the stove, and the spittoon on the left, and then working his way back again in the same order. A Negro lad in a soiled white jacket was busily engaged in placing on the table two long rows of knives and forks, relieved at intervals by jugs of water; and as he traveled down one side of this festive board, he straightened with his dirty hands, the dirtier cloth, which was all askew, and had not been removed since breakfast.' And this bit: 'Very few words were spoken; and everybody seemed to eat his utmost in self-defense, as if a famine were expected to set in before breakfast-time to-morrow morning, and it had become high time to assert the first law of nature. The oysters, stewed and pickled, leaped from their capacious reservoirs, and slid by scores into the mouths of the assembly. The sharpest pickles vanished; whole cucumbers at once, like sugar-plums; and no man winked his eye. Great heaps of

indigestible matter melted away as ice before the sun. It was a solemn and awful thing to see. Dyspeptic individuals bolted their food in wedges; feeding, not themselves, but broods of nightmares, who were continually standing at livery within them. Spare men, with lank and rigid cheeks, came out unsatisfied from the destruction of heavy dishes, and glared with watchful eyes upon the pastry.'

'But Dickens was prejudiced,' protests the outraged reader, 'and, beside, he saw only the least attractive side of our national life.' And is it not possible that our writers — both the superficially political ones and the unpleasantly humorous ones, are also prejudiced when they make a hasty tour through the different countries of South America, without even knowing the language, and perhaps never once stepping inside a private home? What the countries of South America resent in our attitude toward them is precisely what we resented in Britain's attitude toward us. If they appear touchy and aggressive, so did we. And no one should be quicker than we to admit that our relations — economic as well as social — can never attain their most advantageous development when one side is patronizing and the other is irritated.

Books have been written by the ton, speeches made by the hour, to elucidate the subtle points of a better understanding between North and South America. (One of the best, by the way, is Clarence H. Haring's 'South America Looks At The United States.') Much of the matter is not in the realm of politics but in the realm of manners. And the faulty manners are all on our side, both when we tramp with vociferous comments and wise cracks over their coun-

tries, and when we unceremoniously jostle them on our streets and in our hotels when they come to visit our shores.

Nearly every travel book feels called upon to devote a chapter to the morals in South America, based upon the assumption that wherever their code differs from ours it is to be condemned. Until quite recently we had the same idea about France and Italy. The morals of Latin Americans in South America are similar to those of the Latins in Europe, and it is no longer considered smart but only silly to criticize a Parisian because he is not a Kansan, or a Roman because he is not a New Englander. As Santayana has observed, 'A great principle of charity is not to blame the fish for their bad taste in liking to live under water.'

But to talk of the Argentine Republic solely in urban and political terms is as restricted as to refer to the United States as if it only existed in the city of New York.

All through Argentine history the men of Buenos Aires have been in sharp contrast with the men of the interior, with their older Creole culture. The provincial cities of Córdoba, Tucumán, Mendoza, and San Juan (the last two being the oldest of all the Argentine cities) grew out of military trading stations, with a Spanish Colonial aspect instead of the Spanish European aspect which characterizes the Porteños or Port men. Although Buenos Aires dominates the Argentine in a sense, yet it has not absorbed it. These proud provincial cities — Mendoza with its grapes, Tucumán with its sugar — jealously maintain their traditions. The colonies of Esperanza, Santa Fe, and Entre

Rio, settled by Swiss, Italians, Russians, Germans, and French, contribute their products and their problems and are as vital a part of the great republic as is the conspicuous city of Buenos Aires.

The hinterland of Argentina, which was originally peopled by Indians, then by the Spaniards and Creoles, and since 1879 by the European immigrant, has been the cradle and the stage for the unique figure of the gaucho.

The gaucho was not a herdsman who cared for his animals, for the animals cared for themselves. Nor was he a breeder interested in improving his stock, nor an owner who counted his flocks. He was a hunter of the half-wild cattle which roamed by uncounted thousands over the treeless pampa. He paid nothing for pasturage, since this was limitless and belonged to no man. He killed a cow whenever he wanted food — any one's cow, although it was etiquette to leave the hide for its owner, as this was the most valuable item of the carcass. From the day he could walk he was set astride a horse and became part of that animal almost as inextricably as the mythological centaur. He not only could keep his seat on any mount under any circumstances for any length of time, but he ate horseflesh; he drank melted horse fat; he shampooed his head in horse blood to give himself strength. The poorest peon owned a dozen horses, and even as late as 1914 there were as many horses as people in the Argentine.

A singular life evolved from the custom of human beings literally living upon the backs of horses and not in houses, for they only withdrew to these to get out of a storm or to eat the boiled or roasted beef which was their sole food.

The gaucho's furniture was his saddle. His chief personal property was his spurs. And whoever would know more of his wild, brutal, and roving life can read the story of it in the books of W. H. Hudson, who was not an Englishman, as is commonly supposed, but was born in the Argentine, of a Massachusetts father and a Maine mother. Hudson spent many of his impressionable years in Argentina, Patagonia, and Uruguay, and has left the most vivid and truthful accounts which we possess of those countries.

For there is no other region in the world precisely like this treeless untilled plain, extending for seven hundred miles from the sea to the Andes in such a gentle grade (it rises three or four feet to the mile) that it appears absolutely flat. A greenish brown expanse, its soil of fine compacted dust or loess, bearing tussocks of coarse grass, with scarcely a flower to relieve its harsh monotony, and hardly a bird song to break its silence. For the birds who tenant it can see each other and so do not need to call from tree to thicket. And when they do call their voices are subdued as if the silence of nature and the melancholy of the pampa had impressed their spell upon them.

Darwin, describing this grassy sea, explains why it is that it does not give an impression of grandeur and vastness, but only of a level horizon disappointingly near and limited, and Hudson speaks of the same thing, adding that when men who have spent their lives upon the pampa are taken to even a slight elevation and can see from it a more extended view they experience a sensation as of a 'ball in the throat,' preventing free respiration.

It is always to Hudson we must turn if we would under-

stand the mood and appeal of this strange land. In his 'Naturalist in La Plata' he writes: 'On moist clayey ground flourishes the stately pampa grass, Gynerium argenteum, the spears of which often attain a height of eight or nine feet. I have ridden through many leagues of this grass with the feathery spikes high as my head, and often higher. It would be impossible for me to give anything like an adequate idea of the exquisite loveliness, at certain times and seasons, of this queen of grasses, the chief glory of the solitary pampa. Every one is familiar with it in cultivation: but the garden-plant has a sadly decaying, draggled look at all times, and to my mind is often positively ugly with its dense withering mass of coarse leaves, drooping on the ground, and bundle of spikes, always of the same dead white or dirty cream-color. Now color — the various ethereal tints that give a blush to its cloud-like purity — is one of the chief beauties of this grass on its native soil; and travelers who have galloped across the pampas at a season of the year when the spikes are dead, and white as paper or parchment, have certainly missed its greatest charm. The plant is social, and in some places where scarcely any other kind exists it covers large areas with a sea of fleecy-white plumes; in late summer, and in autumn, the tints are seen, varying from the most delicate rose, tender and illusive as the blush on the white under-plumage of some gulls, to purple and violaceous. At no time does it look so perfect as in the evening, before and after sunset, when the softened light imparts a mistiness to the crowding plumes, and the traveler cannot help fancying that the tints, which then

seem richest, are caught from the level rays of the sun, or reflected from the colored vapors of the afterglow.

'The last occasion on which I saw the pampa grass in its full beauty was at the close of a bright day in March, ending in one of those perfect sunsets seen only in the wilderness, where no lines of house or hedge mar the enchanting disorder of nature, and the earth and sky tints are in harmony. I had been traveling all day with one companion, and for two hours we had ridden through the matchless grass, which spread away for miles on every side, the myriads of white spears, touched with varied color, blending in the distance and appearing almost like the surface of a cloud. Hearing a swishing sound behind us, we turned sharply round, and saw, not forty yards away in our rear, a party of five mounted Indians, coming swiftly towards us: but at the very moment we saw them their animals came to a dead halt, and at the same instant the five riders leaped up, and stood erect on their horses' backs. Satisfied that they had no intention of attacking us, and were only out looking for strayed horses, we continued watching them for some time, as they stood gazing away over the plain in different directions, motionless and silent, like bronze men on strange horse-shaped pedestals of dark stone; so dark in their copper skins and long black hair, against the far-off ethereal sky, flushed with amber light: and at their feet, and all around, the cloud of white and faintly blushing plumes. That farewell scene was printed very vividly on my memory, but cannot be shown to another, nor could it be even if a Ruskin's pen or a Turner's pencil were mine; for the flight of the sea-mew is not more

impossible to us than the power to picture forth the image of Nature in our souls, when she reveals herself in one of those "special moments" which have "special grace," and where her wild beauty has never been spoiled by man.'

This is not a mere description of a place. It is, in a sense, the place itself. And perhaps it is a truer revelation than the average man would get through his own eyes. For 'we borrow the light of an observant and imaginative traveler and see the foreign land bright with his aura: and we think it is the country which shines.'

CHAPTER XXII

URUGUAY, LILLIPUTIAN LEADER OF LATIN AMERICA

Shrewd Dean Swift knew quite well what he was doing when he created a Lilliputian kingdom to appeal to the imagination of his readers. There is something about a miniature country — tiny and yet wholly complete — which stirs in most of us a friendly instinct. Not that Uruguay should be compared with toy-like Andorra, Liechtenstein, and Luxemburg, for it is not only many times larger than all of them put together, but it is an independent republic, and no tacked-on appendage or chipped-off principality. As a matter of fact it is larger than a combined Belgium and Holland.

Nevertheless, it is quite small enough to satisfy any one's idea of daintiness, and with its agreeable climate — for it is the only South American country without any tropical region, and its rainfall is evenly distributed throughout the year — with its gently rolling surface of which all but fifteen per cent is productive, with its several hundred miles of navigable rivers and its several thousand miles of sizable streams, it is one of those trim and prosperous particles of a disordered globe which seem to have been created by nature in an especially happy mood. And as if to make up for its own smallness, it has placed itself beside a river whose basin is second in the world in size and flow of water.

So obviously desirable was the Banda Oriental, as it was called when it was a province of Spain's La Plata Colony, that it was perpetually fought over and fought for by both Brazil and Argentina. And when it finally gained its independence from all outside powers, and was recognized as a political entity in 1830, its own warring factions continued to fight in Montague and Capulet fashion for three generations longer, and managed to appoint and depose and assassinate an astonishing number of leaders. However, it has been peaceful now for twenty years, and its last three elections have been carried through without armed disturbance. And during this period it has developed so rapidly and so intelligently that it now occupies a leading position not only in Latin America but among the Latin-American circles in Europe. It is Uruguay which is sponsoring the proposal to form a Latin-American bloc of those republics which are united by so many common interests and separated by so many insignificant differences.

If at first it seems to the stranger to be not a separate nation but a part of a larger one, this is because of the uniformity of its climate and scenery, and the fact that it is given over entirely to one industry. Cattle and sheep are the determining social and political factors of Uruguay. The whole economic condition of the country rests upon them. It has more cattle than the vast dominion of Canada. The wool clip is as important to its prosperity as the cotton crop is to Texas. Ninety-five per cent of its exports are animals and animal products, and although large areas could be used for varied agriculture only a sufficient amount to maintain home consumption is so

employed. Once only jerked and salted beef was exported. Now with the huge refrigerating plants of Armour, Swift, and Morris, and the extract and manufacturing plant of Liebig and other foreign companies, all this is changed. Refrigerated meat, glue, tallow, skins, and wool complete the simple summary of the exports of this wholly pastoral people.

If we would have this pastoral side of Uruguay interpreted for us we must turn again to Hudson, as we turned to him in the Argentine: to 'El Ombu' and 'The Purple Land that England Lost.' The latter is a description, half imaginary, and yet wholly true, of the adventures of a young Englishman wandering beyond the fair slopes of Montevideo through 'how many leagues of pleasant wilderness, sleeping in the sunshine, where the wild flowers waste their sweetness and no plough turns the fruitful soil, where deer and ostrich roam fearless of the hunter, while over all bends a blue sky without a cloud to stain its exquisite beauty.' As if under a hypnotic spell the reader gallops with the writer for weeks and weeks across that purple land: draws up with him before a solitary mud rancho with a wattled roof, guarded by savage dogs, and spends the night with a grizzled old herdsman who wears a knife a yard long at his waist. He stops at a pulperia or wayside inn and drinks and talks with a satirical philosopher dressed in shabby gaucho habiliments — cotton shirt, short jacket, wide cotton drawers, and a chiripa, a shawl-like garment fastened at the waist with a sash, and reaching halfway between the knees and ankles. In place of a hat he wears a cotton handkerchief tied carelessly about

his head; his left foot is bare, while the right one is cased in a colt's skin stocking called bota-de-potro, and on this distinguished foot is a huge iron spur with spikes two inches long — one spur of this kind being sufficient to get out of a horse all the energy of which he is capable. He gallops on through valleys and accepts a steaming bowl of maté in the kitchen of another remote and isolated ranch, sitting on the polished skull of a horse, the usual chair of such dwellings, and while children and pet armadillos and monkeys and parrots stand about and stare, he listens to a dark-eyed boy singing to his guitar the plaintive ballads of the purple land. Again he presses on to another estancia, of six or seven thousand head of cattle, and lingers for several days in the room — forty feet long, with a roof of reeds, a hearth in the center of the floor, upon a clay platform fenced about with cow shanks, half buried and standing upright. There are no chairs, no tables, knives, or forks in this kitchen. Every one carries his own knife and slices off huge pieces of the boiled or roasted beef which, with maté, constitute the only food. After every meal what is left of the meat — twenty or thirty pounds — is thrown into a wheelbarrow and carried to the distant heap where it feeds scores of hawks, gulls, vultures, and dogs. On — on again, until he gets involved in the hospitalities of a colony of English gentlemen who spend their time and their remittance money rum drinking, ostrich hunting, partridge shooting, and horse racing, and sit down to a feast of a cow, lassoed before their eyes, cut up with the hide on, and roasted thus, its flavor and tenderness comparing to meat as Europeans know it as a new-laid egg

compares to one from cold storage. He is drawn into revolutionary intrigues, romance brushes his shoulder, and he emerges at last, imbued with the wild, delightful flavor of that fresh air, of those free and chivalrous and untamed individuals, not petrified, as in older civilizations, into any social stratifications.

This Banda Oriental through which Hudson so lovingly, so rhythmically bears us, is the Uruguay not of to-day but of the late sixties and early seventies of the last century. But it is an essential part of the background and history of the country, as Bret Harte's stories and Hawthorne's novels and Cable's romances are part of our own West and North and South.

To-day if we should leave the city and go into the interior, we should find not only grazing pastures and stockyards and vineyards, and fields of wheat and corn and flax. We should find experimental farms used for trial plantings; aggressive campaigns against insect pests; horticultural and cattle expositions; government nurseries to encourage tree planting in this treeless land, and fisheries. We should learn that Uruguayan engineers and agricultural experts are constantly sent to Europe and the United States to keep abreast of the new movements.

Although Uruguay is no longer the wild Banda Oriental of Hudson's rambles, it is still a nation of drovers and herders and packers. And yet there is nothing rustic about Montevideo, the principal city, where a quarter of the population live. It is, on the contrary, one of the most chic and vivacious capitals in all South America.

The white curved beaches and balustraded promenades,

THE BATHING-BEACH, MONTEVIDEO

the casinos and rose-planted boulevards along the beaches are the summer resorts for fashionable Argentina and Brazil. The private homes are elaborate and gay, their bright tiles set off by brighter flowers and by blossoming shrubs and trees. The city itself, well drained and washed, thanks to its advantageous location sloping toward the river, is quite a glitter of parks, smart shops, clubs, and substantial business buildings. There is, in this moving crowd of automobiles and trams, little to suggest its history, except the Old Town Hall, which is a Colonial building, and the superb Solís Theater, which is named for the first white man — Juan de Solís — to land in what is now Uruguay, and to pay for his temerity with his life. But for the rest everything is new: in fact, the names of the streets are far too new for convenience, as they are changed with every change of government — a compliment to the officials, but a confusion to the inhabitants! The Legislative Palace, the University — which departs from certain of its neighbors by being quite as excellent in its courses of instruction as it is impressive in its façade — hospital, museum, penitentiary, library, and Government House — these are all full-sized architectural blossoms from this mustard seed among the South American Republics.

Although this brisk and pretty little republic is a heartening spectacle, it is not a phenomenon, but quite a logical result of favored circumstance. It is most admirably situated. A perfect harbor on the Atlantic, the Uruguay and La Plata Rivers for its boundaries, an inland lake — Lake Merim — between its border and that of Brazil, and its many navigable waterways made it immediately accessible

in all its regions to those Europeans who came not to conquer but to colonize. They needed land for their cattle and spread out all over the fertile country. Now railroads (nine tenths of them owned by the British) penetrate the interior thoroughly, tap the commerce along the Uruguay River, and extend as far as Brazil. Good roads augment them, for neither railroads nor highways are a problem as in mountainous or jungle regions. And beside these plentiful land and water communications there is regular air service between Buenos Aires and Montevideo, so that mail can be sent, answered, and returned in the same business day. Favored mustard seed, planted in such fertile soil and encouraged by such felicitous conditions!

One may have arrived in Montevideo by motor, airplane, or the overnight boat, but the chances are he will leave by one of the many ocean liners waiting in the horseshoe bay — two miles across its mouth, illuminated by a revolving lighthouse, and its loading and unloading operations facilitated by modern docks and machinery. Boat service is frequent, and offers accommodation to every purse and every destination. The European steamers to and from the East Coast all stop here, and all the ships that pass through the Straits of Magellan, including those on the way to New Zealand and the West Coast. It is, of course, a regular port of call for the Munson lines from New York. Paysandu is the end of navigation for seagoing vessels, but smaller steamers can go up the Uruguay River as far as Salto — four hundred miles from Montevideo.

The human contents of this duodecimo edition of a

republic are, like its binding, singularly uniform. There are no aborigines, no mestizos. There are practically nothing but Caucasians — chiefly Italian and Spanish, but with a salutary admixture of French, German, British, and Swiss. With such a population it has been possible to enact enlightened legislation: the free schools, the six-day week, the eight-hour day, old-age pensions and employer's compensation. Many of the industries are state monopolies. The Government owns the banks, the interior telegraph lines, and the electric-light plants in twelve of the principal cities, and the sanitary works in most of them, and Uruguay's credit is sound in all the financial centers of the world. It was for years the only country where the traveler with the American dollar in his pocket lost money in the exchange.

But although the visitor will acknowledge the admirable planning, building, and maintenance of this enlightened metropolis, yet it will probably be some of the unfashionable streets down by the water which will linger longest in his memory: streets lined with old one-story buildings laced by fine bits of wrought-iron in balcony and grill, with weather-eroded pillars on their azoteas, and with tiled patios half glimpsed through half-opened front doors. The lower part of the city is so narrow — almost a peninsula in the mouth of the La Plata River — that one can stand in the middle and see the water on both sides. Loitering along the varied shore he may still come across places unstamped by either fashion or commerce. Here waves wash over the ruined walls of a house or a fort abandoned long ago, and it is possible to fancy that from those enigmatic deeps

there faintly rises the knell of some submerged cathedral....

The city proper may be justly and flatteringly compared to many other enterprising and enlightened centers of culture: its 'ramblas' are in the category of fashionable watering resorts the world over. But these scattering environs are unlike any other place or any other country. The melancholy of time has pressed its patina upon them and the waters of the river and the bay perpetually wash against their walls.

Driving out into the rural spaces we are still in the same winning atmosphere, moving through an idyll where there is never drought nor frost.

In spite of the name Montevideo — 'I see a hill' — the country does not seem hilly, but more like a rolling pasture land. There are occasional ridges of mountains, but none of these is more than two thousand feet.

A farmhouse, set in a courtyard closed by a massive gate, settles close to the earth under a solitary ombu tree. A horseman gallops past, and a black-haired girl in a red-striped apron standing in the sunlight watches him disappear down the brown road.

CHAPTER XXIII

A PORTUGUESE PRINCE

On the southwest corner of Portugal, in the province of Algarve, a promontory rises from the sea. Upon this promontory, more than five hundred years ago, a prince who had left the luxuries of the Lisbon court built an observatory. This young prince was a warrior and a courtier, but he was also a lover of mathematics, navigation, and astronomy, and he built his observatory to obtain more accurate tables for the declination of the sun.

Few people have heard of the town of Sagres, which sprang up around the royal enterprise: few have heard of Prince Henry, the Navigator. And yet to this ardent and scholarly son of John I of Portugal can be traced that tremendous impulse which, for a span of eighty-four years, made Portugal the foremost colonizing and commercial power of the world.

Prince Henry had practically none of the instruments and little of the knowledge that are commonplace to-day. No one had yet navigated the Atlantic: the Portuguese were to make that possible by their invention of the quadrant and astrolabe, and the use of astronomical observations. The telescope was still to wait a hundred years for its creation in Holland, and the ocean route to India was not even shaped into a dream.

But the young prince, high in his observatory at Sagres, gathered together the fullest information, the most accurate instruments and maps that he could find, and placed

them at the disposal of his sea captains. He extended hospitality to all the scientific men of the age, and sent out expedition after expedition across the Atlantic and to the south. Inspired by his interest and his intelligence, the Portuguese sailors and adventurers streamed forth. They had always been good seamen, for the long littoral of their country and its many harbors and rivers, had bred them to this, and the interposing hostility of Castile and Aragon had forced them to maritime instead of overland commerce with England, Flanders, and the Hanse towns. They were the natural inheritors of the tradition of exploration which had been carried on during the middle ages, chiefly by the Arabs, and now they developed into the most daring adventurers of the civilized world. They discovered the Azores in 1419; rediscovered Cape Verde Islands in 1448 and Sierra Leone in 1460. Vasco da Gama doubled the Cape of Good Hope and completed the journey up the eastern coast and across the Indian Ocean in 1497. It was three Portuguese sailors who discovered Japan, and a Portuguese, in service of Spain, who sailed through that passage now called the Straits of Magellan in his honor. He reached the Philippines, and died, but his ship, the Victoria was the first to encircle the globe.

Vast profits from import trade with her colonies carried Portugal to the climax of her golden age in literature, architecture, engineering, and the minor arts. Lisbon was the culmination of Oriental splendor and the culture of the Renaissance, for the King of Portugal was also 'Lord of the Conquest, Navigation and Commerce of Ethiopa, Arabia, Persia, and India.'

There was competition between Portugal and Spain, although the exploits and prestige of the former might have seemed to lift her beyond rivalry, and, to meet their conflicting demands, in 1494 the Treaty of Tordesillas was negotiated. This treaty gave Portugal all the land which might be discovered east of a straight line drawn from the Arctic Pole to the Antarctic, at a distance three hundred and seventy leagues west of Cape Verde. Spain received the lands discovered west of this line. As all known means of determining longitude were so inexact, the treaty was subject to diverse interpretation. But the most important result of its promulgation was this: Portugal claimed a certain vast tropical country already scatteringly settled by her explorers. She claimed and was awarded Brazil.

CHAPTER XXIV

SANTOS — AND COFFEE

It is Brazil that we now approach: Brazil settled by the Portuguese and not by the Spanish and still speaking the language of its mother country. It is Brazil, which has absorbed the red man who was indigenous as well as the black man who was subsequently imported, and thus produced a culture unlike that of any other South American country. Brazil, with its slumberous tracts extending over an area two hundred thousand square miles larger than our forty-eight United States.

A long and gentle river winds between low banks and pretty beaches. Palm trees slant over it and a warm radiance is diffused through the air. The river is meandering toward Santos, and a leisurely hour after leaving the Atlantic the city presents its ancient palaces to the water front, while its venders jam in a bright vociferous throng about our slowly docking vessel, offering parrots on perches, marmosets in cages, and oranges and bananas in baskets.

As the river led us to the shore of Santos, a canal leads us still farther into the town — a narrow canal not unduly clean, but quivering to the rhythmical drowsy movement of flat-bottomed boats, piled high with bananas, being sculled to and from the market and the dock.

The canal comes to a tranquil end at the market-place, where canaries, casseroles, and coconuts are displayed in

THE GLORIOUS SANTOS BEACH

vivid confusion. The tender trunks of young palm trees are piled up like cordwood. For a quarter you may buy one four feet long, and the merchant will peel off the outer coverings and give you the delicate pith for a salad. Many of the fishermen and green grocers are Japanese, and groups of kimono-clad women squat before the market stalls, holding eggs up to the sun and squinting at them to determine if they are fresh. The canal and the basin are an aqueous scene for the perpetual native drama of buying and bartering, sleeping and arguing. Squawks, saunterers, and saloons infuse their odors and sounds into the caressing air.

But while all this is a characteristic segment of Santos and of Brazil, the most important feature of the port, which was at one time the capital of the State of São Paulo — which is about twice the size of New York State — is, of course, the coffee.

Coffee — coffee — coffee! It pours out of the port of Santos at the rate of twelve million bags a year, and each bag weighs a hundred and thirty-two pounds. The docks are always lined with vessels from every country in the world, busily stowing away the brown bags. On the more modern ones they are hoisted and emptied into the hold by means of an endless belt run by electricity.

Once you have stepped ashore it makes no difference what street you take. In every other shop coffee is being handled in some form or other. Here it is piled in a huge heap on the floor and men with wooden ladles are tossing it into the air. Yonder are counters with girls sorting and packing. Here is a factory making the jute bags in which

it is shipped. The peculiar acrid smell of raw coffee permeates the air, and our nostrils and lungs. Greenish-white coffee beans are scattered under foot and being swept into the gutters. The well-cobbled streets are alive with light dog carts on balloon tires pulled by small horses or sleek donkeys, and they are bearing men who raise coffee, who sell coffee, and who pack coffee, to and from their places of business.

Seventy-five per cent of all the coffee used in the world comes from Brazil and over half of that passes through the port of Santos. One reason for this prodigious figure is that in this region the productive life of the coffee shrub is frequently extended to forty or fifty years, which is double the time in other parts of the world. Throughout the great State of São Paulo the great coffee plantations with their shining leaves, their brief white flowers, and dark red berries, extended in apparently endless miles in every direction — strong coffee, as it is called in the trade. For the terms mild and strong refer, not to the coffee in your breakfast cup, but to the temperature at which the shrub grows. Mild coffee grows at a relatively mild temperature, as in Colombia, five thousand feet above sea level. The Brazilian coffee, growing at twenty-five hundred feet, is strong coffee.

Unlike certain other cities whose entire economic life is based upon a single industry, Santos possesses other diversions. Good casinos and modern hotels, both up on the mountain and down along the shore, offer cabarets and an evening's gaming, and the beach of Guarujá is much loved by the Brazilians.

Once upon a time this port of Santos was a dreaded and a dreadful place. Vessels refused to come in here, and if they were forced, neither crew nor passengers would step on shore. For yellow fever stalked up and down the streets and entered palace and hovel. Terrible stories were told of whole fleets rotting at anchor because there was not one soul left alive to navigate them. Now Santos is cleaned up, and is as healthful as any port anywhere. To-day not only the darting dug-out canoes and clumsy Amazon river craft come nosing up into the harbor with its three miles of granite quays, provided with the best of modern machinery and equipment, but ocean liners from Scandinavia, the Orient, and the United States wait their places at the docks. There are freighters from England and passenger vessels from Germany, and on a French warship glint the red caps of Gallic sailors.

The wind blows down the cobbled street between the one-story houses and the tiled churches, and the more modern business buildings. It rattles the leaves of the royal palms which sway upon their slender trunks and fans the air, heavy with the scent of coffee. We have been taught that a 'coffee heart' is a disastrous affliction, but Santos appears to endure it cheerfully. Coffee — coffee — coffee —— After seeing Santos we understand why the coffee plant was adopted into the national coat of arms in 1822.

CHAPTER XXV

SÃO PAULO: HER PEOPLE AND HER PROGRESS

The thriving city of São Paulo, in the thriving State of the same name, is the dynamic industrial center of Brazil. Perhaps that is why it seems uncharacteristic of that leisurely land. This modern metropolis, cool and healthful at twenty-five hundred feet above sea level, and with an average mean temperature of sixty-five degrees, reminds us of one of our own energetic Western cities. It is fifty miles from Santos, and the splendid railway which connects the two is a far cry from the first road which was constructed by those indefatigable Jesuits who in 1554 founded a mission station which they named São Paulo.

João Ramalho, who had been put ashore for mutiny early in the sixteenth century, later met other Portuguese sailors landing under Alfonso da Souza. He made their peace with the Indians and led them up to the high and healthful plateau. During the sixteenth and seventeenth centuries the settlers organized military expeditions and penetrated into the interior by paddling up the rivers in light boats. The Bandeirantes, energetic and daring, marked out the boundaries of the present country of Brazil, and in 1681 São Paulo became the seat of the government. The whole state has always been notable for its liberal and courageous spirit of enterprise, and it contributed largely to the events which led to the independence of Brazil from Portugal — at which time it became one of the twenty States of the Brazilian Federation.

Long before the train reaches the station we leave the banana plantations and mamão trees behind and find ourselves passing through a factory district, extensive enough to boast a wide range of manufactured articles and an invested capital of five hundred million dollars.

And thus we arrive at a city which claimed during the year of 1925 that a new structure was built every half-hour, which beats Chicago even at the most frantic period of its formation.

Its prosperity is, of course, based upon coffee, but cotton is also an important crop. Although this plant is not indigenous, the yield here is larger per acre than in any other country in the world. The maximum is a thousand pounds per acre, instead of the ninety pounds of India, the hundred and forty-two of the United States and the two hundred and thirty-two of Egypt. Coffee and cotton, and also sugar and rice, offer employment to a continual stream of immigrants, whose coming is welcomed and whose establishment and education are made as attractive as possible. As this single enterprising State of Brazil is as large as the combined areas of Holland and Denmark, Sweden, Switzerland, Portugal, and Greece, there is room for every one, and a heterogeneous lot they are.

First numerically are the Italians, who regard São Paulo as a new world Eden. And indeed it has proved to be such for hundreds of penniless Italian boys who arrived with less than nothing, and now own palaces and factories and immense plantations. To them São Paulo and all Brazil owe much of their musical enthusiasm. Carlos Gomes, the creator of Brazilian grand opera, was born in Campinas in

1839, and although the bulk of his work was composed in the prevailing Italian style, his opera 'Guarany' used Brazilian Indian themes and is especially valuable on that account. After the Italians come the Spanish and Portuguese, Japanese, Asiatic Turks, and Germans, and so down through a dozen nationalities. As a local guidebook says: 'The immigrants came in large quantities. São Paulo waked or woke up. And the sons of the State worked hard and all the city was placed upon a base of transformation which from day to day is more remarkable.' To this same guidebook we owe the information that 'the street cars in São Paulo run in great extensions, with very important electric energy' and that 'there is not in São Paulo a true time for the works of the theatres. During all over the year the theatres of São Paulo work with every activity.' But if the English of the guidebook is halting, it is the only thing in the city which could be criticized on that ground. This breezy and commercial center is equipped with thoroughly first-class hotels, parks, residences, skyscrapers, and a municipal theater of sumptuous proportions. There are schools — primary, secondary, normal, professional, and technical, and the night schools are also well attended. Over three hundred and fifty periodicals are published in the State.

But probably the sight which will most interest the visitor will be the famous 'snake farm.' Five miles outside São Paulo, in the Pinheiros district, a large white building on a hill looks out over other hills, not unsuggestive of the Roman Campagna, and down upon seven hundred acres of the estate of Butantan. Here are kept thousands of

snakes, and from the laboratories are sent out yearly six thousand phials of serum, the injection of which will cure victims bitten by snakes, venomous spiders, and scorpions. Before the Institute began its work in 1902 it was calculated that between four and five thousand people died from snake bites every year in Brazil, nearly all of them being agricultural laborers in the prime of life.

Inside the main building are chemical laboratories, biological and bacteriological departments, museum, etc. In the grounds are enclosures for poisonous and non-poisonous snakes, the stables, a medicinal herb garden, and residential buildings for the staff, including the house of Dr. Vital Brasil, the originator and director of the work.

According to the best modern ideas, the scientific work in the laboratories is supplemented by a wide and continuous educational campaign. Not so very long ago a Brazilian laborer bitten by a snake fled, terrified, to the remedies of his childhood — contact with the skin of a jaguar or the feathers of a partridge — or he swallowed some of the snake's internal organs or a dose of poison as a counter-irritant. Now the first thing he does is to seize the reptile that has bitten him. He knows that it is able to strike only from the coil at a third the distance of its own length and that after it has bitten it is incapable of moving far or fast and will have no more poison to discharge for fifteen to thirty days. Therefore he carries it without fear to the nearest farmhouse where, thanks to the Butantan Institute, serum and syringes are available. He furthermore knows that if he sends in a live snake to the Institute he will get a tube of serum free, and with six live

snakes six tubes and a syringe, that it will send him special instruments for handling snakes and boxes for forwarding them, and that most Brazilian railways will transport such boxes free of charge. In the State of São Paulo snake bite was formerly responsible for three out of every thousand deaths. Now it is responsible for less than one. In nearly all cases treated by the serum the life of the victim has been saved. The few cases of failure are due to too long delay, or to defective methods.

All this scientific achievement is made graphic to the layman by the reptile garden, into which he is admitted without question or fee. Here he will find, surrounded by a low cement wall with a narrow moat inside, a number of dome-shaped cement structures that look like bee hives, with arched doors on four sides. Lying in these apertures, or moving sluggishly over the concrete floor, or coiled on the tops of the bee hives, or floating on the moat, are several hundred serpents of different kinds, all inimical to human life. At one side is a similar enclosure where non-poisonous snakes are kept for biological observation. These lie along the branches and hang down from them and look quite as ferocious as their dangerous cousins, and frequently resemble them closely in color and in markings. Many of these snakes are brilliantly marked and hued, and certain ones live entirely upon other snakes, not hesitating to swallow one as large as themselves. There is one for which Dr. Vital Brasil asks special protection — the Mussarana, which slays the rattlesnake and other vicious members of the tribe. It is unnecessary to feed the poisonous snakes, since they can live for nearly a year without

food, and the sole object of keeping them is to obtain a supply of venom for preparing serum. To extract the poison from a snake, an expert picks it up on a stick, seizes it behind the head in such a way as to force the jaws open, and then presses on the poison gland which lies behind and below the two striking teeth. A clear drop immediately appears at the point of each of the big curved teeth and this is caught in a glass vessel — each drop sufficient to kill a dozen men. The snake, torpid and harmless, is then put back in the enclosure.

For the preparation of the serum horses are found to be the best laboratory, developing an anti-toxin in the blood which is converted into the serum which has saved so many human lives. These horses are kept and cared for in the stables on the Institute grounds.

Other States in Brazil have institutes modeled upon Butantan, and now, like yellow fever, death from snake bite is becoming past history in the country.

São Paulo does not offer the romance of other parts of Brazil, but it does give every visitor a more sympathetic admiration for what the country is doing. All Brazil is incalculably rich in mineral and agricultural possibilities. But the State of São Paulo with its energetic capital is the only one in the union which has, so far, efficiently organized its powers and controlled them into practical progressiveness.

CHAPTER XXVI

RIO DE JANEIRO

WHEREVER the solid element of earth meets the liquid element of the sea, there is opportunity for dramatic scenery, and should we travel up and down the fringes of all the continents and all the islands which compose our globe we should find diverse manipulations, natural and artificial, of this opportunity. But nowhere upon the two hemispheres would we find a spot where nature and man have coöperated in more inspired effect than in Rio de Janeiro.

Nature created a bay large enough, deep enough, and protected enough, to hold all the navies of the world, and man has built his docks at one end, and at the other swept out a drive that follows the curve for fifteen glittering miles. Nature has scattered islands in the bay, and man has fashioned upon these islands fairy-like edifices, with minarets and towers and filaments of bridges like the castles of a dream. Nature has carved out gigantic mountains, their distinctive silhouettes purple against a lavender sky, and man has raised white palaces and pergolas and skyey gardens of scarlet and blue upon their sides and summits. Nature has cleft ravines between these mountains, and man has wrought winding roads along these clefts, and hung his magic dwellings against their precipitous sides.

The early Portuguese colonizers built great churches

RIO DE JANEIRO AND THE SUGAR LOAF FROM THE CORCOVADO

with golden domes, and hung a hundred bells within their steeples. The present-day Brazilians have leveled hills, made beaches out of swamps, cut gleaming avenues straight through the city, and edged them richly with sidewalks of black and white mosaic.

By day the sun shines upon the flowers, and palm trees and silver beaches, or the rain washes clean walls and walks that are never sullied by smoke in this chimneyless land. By night the colors and the curves sink into blackness and ten thousand thousand lights encircle the shore line, twinkle up the dark defiles, and lie like a crown upon the top of Pão d'Assucar.

Thus all forces, all ages have conspired together, first to cut and then to polish a gem which finds no counterpart — no, not one — among the cities of mankind.

CHAPTER XXVII

RIO DE JANEIRO
DAYS OF THE REGENCY AND THE EMPIRE

JUST as the vast and slumberous green tropics of Brazil are unlike the gray deserts of Peru, the icy mountains of Chile, or the flat pampas of the Argentine, so is her history unlike that of any of the other South-American Republics.

There is no period of bitter conquest and cruel domination by the Spanish: in fact, except for a brief period in the sixteenth century when Spain got possession of the then fragmentary colony, there are no Spanish. Neither their traditions nor their language have ever existed in Brazil. The country was settled and governed first as a colony of Portugal, then as an empire and a regency, and finally as an independent republic with extraordinary freedom from strife and bloodshed. The mild Portuguese never systematically tortured and slaughtered the Indians. Although they enslaved them, they also intermarried with them. Although they, along with the rest of the world, imported African slaves, these too, they freed, and gradually absorbed into their body politic. This happy land has made an unique record in her treatment of her emperors, kings, regents, and presidents. She has never assassinated any of them. Thus it is that the beauty of modern Rio de Janeiro with its glittering boulevards, its ornamented façades, its exquisitely chiseled waterfront, is superimposed upon an ancient empire of happiness, and of this period there still remain certain mementoes.

Foremost among these is the palace of Quinta da Boa Vista where lived Dom João, that King John who, driven out of Portugal by the Napoleonic wars, came with his entire court to Brazil — the only instance in history of a colony becoming the seat of the government of its own mother country, and, except for Maximilian in Mexico, the only attempt of European royalty to rule upon the continents of the Americas. To reach the palace we pass the often-pictured Mangue Canal, reflecting in its water double borders of royal palms.

In 1818 this whole region was swampy land, except for one straight road running east and west, and called the Mangue. This road was built for the carriage of Dom Pedro to pass over on his way to the palace. Later oil lamps were hung along its sides, so that royalty could pass in safety at night, and the road was called Caminho dos Lampeãoes (the road of the lamps). Now the canal drains the marshy land, emptying into the bay at the end of the docks, and the path once reserved for royalty is a wide avenue, carrying the trams and buses of the proletariat, through an unfashionable quarter of town.

In order to get to Boa Vista we must follow the old straight line that Dom Pedro took, and so come to the green acres, the lakes and terraces and drives which were the estate of Elias Ontonio Lopes. He presented this entire tract to the Prince Regent in 1808, and in return was given a knighthood and a high position at court. The palace is now the National Museum, but not even that forbidding term has altered the proportions of the stately walls or entirely destroyed the atmosphere of imperial days.

The entrance is noble — a semicircle with a marble balustrade sweeps up to the three great gates. Within the gates the main vista between two rows of trees opens directly up to the distant palace. Either side of this central drive is framed by lawns, planted with tropical shrubs, a lake with an islet, and a pillared summer house. Before the residence is a balustraded terrace with parterres of flowers, with formal urns and lamps, and the entire place — palace and pleasure walks — is encircled by the hills, tawny or verdant with the succeeding seasons.

After that bloodless coup d'état of 1889 which resulted in the emperor and his family being deported, the palace became the seat of the first National Assembly. Now it is the Smithsonian Institution of Brazil, extending hospitality to all branches of natural science, and carrying on field investigations in geology, anthropology, and the allied sciences, and publishing the results. And the park belongs to the city.

Of the various exhibits, probably the one of most interest will be that containing the bead and bark and feather work; the ceramics, the weapons, rugs, canoes, and musical instruments of the Indians; and to our unscientific eye the hammock, whose scalloped ruffles are embroidered in bright feathers, reveals more of the nature of the one who slept in it than does his skeleton, sitting upright in a near-by case of glass.

There is another museum in the city proper, and this also is an agreeable surprise in its intimacy, and in its revelation of past glories.

In the Historical Museum down by the waterfront, built

in 1882 with Colonial simplicity, are none of the grand stairways, or immense salons of Quinta da Boa Vista. In its perfect proportions, in the fine tiling of its roof and eaves, in its carved oriel windows, it is, perhaps, the most charming building in Rio.

Within we find the vivid personal revelations of Brazilian history of which the National Museum is the mere formal husk. Here are the china and silver and glass which were used by princes and priests. Here are the fans which fluttered in the fingers of the ladies of the second regency — fans of ivory and mother-of-pearl and tortoise shell. Here are the silk-lined coaches and sedan chairs in which they were conveyed over the muddy roads. And here is the carriage in which General Osorio went to war against Paraguay — that fearful war in which every single Paraguayan man was killed. There is furniture which belonged to the fascinating if somewhat dubious Marquise of Santos: mementoes of the empire and of the present republic. The inner court, with its fountain, its shallow severe balcony, and its hand-blocked tiles, is one of the best examples in the city of Colonial simplicity.

But the habitation and personal possessions of a man — even of a king — tell only part of the story. Dom João VI brought with him from Portugal not only his nobles and his furniture and his authority. He also brought sixty thousand volumes, and was perhaps the first king who ever made an entrance into a conquered land with his hands full of books. In the National Library, which is a large and imposing building on the Avenida Rio Branco, are these unique and early editions, including a Mainz

Bible printed in 1462. It has no title page, and its parchment leaves are clearly and brightly illuminated with blue and red capitals at the beginning of the books and chapters — a cheerful Bible in a city where church-going has always been cheerful.

Even the most hasty visitor to Rio de Janeiro must pass the National Library, and many mount the spiral stair to the roof to see the view. But there is another which few discover — and this is the Portuguese Library — a Sainte Chapelle among the book rooms of the world.

It is situated on a rather obscure Rua Camões; its façade of Lisbon marble is a replica of a certain monastery in Portugal. Within, the graceful twisted columns, the carved furniture, and fretted balcony are of dark wood, picked out with old gilt. The seventy thousand volumes, ranged in their leather covers on the open shelves, seem the cherished collection of a scholar. Here is a complete collection of Luis de Camões, whose statue decorates the outside, and here are all sorts of bewitching odds and ends, including a first edition of 'Alice in Wonderland.' It is always quiet in here, and a little dim in the shadows. The mosaic tiles of the floor are like a faded Oriental rug, and the polychrome glass dome of the ceiling softens the sunlight and sifts out the glare. The delicate elaboration of the finish, the tranquil proportions of the hushed room are perfect. This is one of the architectural gems that can never be deliberately built, but is born in beauty, gathers to itself the richness of maturity, and finally enfolds itself in the final bloom — the patina of protected age.

When Dom João VI made that amazing entrance into

Bahia, he not only issued the Carta Regia opening the ports of Brazil to the commerce of the world, not only built palaces and established his court, not only founded a library, but he changed the entire landscape of Brazil. It is due to him that the thousands of palm trees now wave their feathery tops against the tropic sky, for he planted the mother of all the palm trees in Brazil.

To make our obeisance to this venerable progenitress we must go to the Jardim Botanico — a pungent treasure house only equaled by the arboretum in Buitenzorg, Java.

To step through the entrance gate is like stepping over the grass-grown threshold of some topless temple. The three radiating corridors, framed for six thousand feet by precisely planted royal palms, are as impressive as the rearing columns of Carnak. They are gray, too, like the columns of Carnak, their monotone softened by splotches of green and rosy moss and by infinitesimal clinging ferns, and they form a fitting aisle into what is probably the most complete collection of palms in the world. These specimens are planted with great taste, and although each one has its placard telling its name, number, and original habitat, they escape the mechanical formality of an arboretum, so that even those visitors who know and care nothing for botany must enjoy the pleasing effect of greenness and ordered tranquility. There are date palms from Africa and coconut palms from Polynesia; the palm from whose fiber hats are made, and the one from whose seed buttons are made. Here are clumps of Japanese bamboo, its yellow stems traced with green as if just painted that morning,

and sweeping over one side of a long alley — transforming it into a shady tunnel — are bamboos from India.

Farther in, standing in stately isolation as becomes her high distinction, is the mother of all the palms in Brazil. On a little altar she stands, a stone table at her feet to tell that she was planted in 1808 by Dom João VI, whose bronze bust stands facing the maternal palm. Her once smooth trunk is a little whiskery and hoary now, but her crown of verdure one hundred and fifteen feet above us is still vigorous after its century and a quarter. Dom João had the fancy to keep this imported tree unique, and ordered every seed which fell to be burned. Like the English dove-cot which was permitted only to nobility and clergy, the palm was to be exclusive to royalty. But the slaves stole seeds and sold them and now the 'feather duster of the gods' waves on every hillside and terrace in Rio, and the seeds are distributed free from the Botanical Garden to whoever wants them. Once the prolific old mother was sick and there was great anxiety lest she die. But medicinal baths and solicitous treatment restored her and she lived to count her progeny by the thousands.

Leaving her upon her shrine of isolation, we find ourselves in such a maze of 'shredded perfume' as Browning must have imagined when he wrote of

> '... cassia, sandal-buds and stripes
> Of labdanum, and aloe-balls,
> Smeared with dull nard...'

for the air is heavy with the scent of magnolias from Virginia, yuccas from Florida, the intoxicatingly sweet oleander from China. From China, also, was brought the

clump of green from which, if a twig is bruised, drifts the pungent odor of camphor. Break a twig from that tree: it is the cinnamon of India; and yonder thick-leaved parasite vine bears our familiar vanilla bean. The lemon is from Asia; the tea plant from China, bearing a blossom like our own syringa. Everything seems to be here except the wooden nutmeg from Rhode Island.

And now we make the acquaintance of a whole new category. Many roots stream down from the branches of the pandamus from Madagascar, seeking the ground so that they may live again. Crooked pecans from Asia straddle themselves into an avenue. The Bicuiba, a native of Brazil, bleeds red blood when it is pierced, and a scarred and obliging rubber tree oozes, in response to a jab from a pen knife, something that looks like milk but becomes an elastic thread in a few seconds. When a knife is thrust between the close folds of the traveler's palm, from Madagascar, a strong stream of cool sweet water gushes forth — a gallon of it. This is the desert palm, and imagination leaps to picture it yielding up its store of water to travelers dying of thirst. Dozens of objects resembling yellow Japanese lanterns hang like decorative pendants from the boughs of the Jaca, and if you want to lure wild monkeys to your grounds, plant a Jaca upon your country estate. The Egyptian lotus is floating on a pond, saving its sweetness for the night, and on the surface of a lake lies the gigantic Victoria Regina from the Amazon. Its immense leaves, turned up neatly around the edge, are the size of tiffin trays and look as if they could support a man. The mimosa shivers and shrinks as we touch it in

passing; the pau Brazil, from which the country derived its name, gives its vermilion dye. There are dozens of varieties of bananas, the tree from whose root sago is made, and azaleas from India. All, all are here

> '.....every one
> From silken Samarcand to cedar'd Lebanon.'

The Portuguese domination in Brazil was marked by a curious felicity. A king who founded libraries and planted trees, an emperor who was so liberal that he permitted the spread of socialist doctrines that were to lead ultimately to the abolishing of all monarchy, a regent princess who voluntarily freed the slaves, and finally an emperor and his family who were politely and gently deposed, and their private property respected, when the time was ripe for a republic.

Ah, yes, Brazil has gone softly all her days, in comparison to the stern, harsh standards of a fighting and tumultuous world.

CHAPTER XXVIII

RIO DE JANEIRO: INCENSE FROM THE CHURCHES

As the foundations of the United States of America were imbedded in Protestantism, so the foundations of the United States of Brazil were imbedded in Positivism, that intellectual religion of reason which flourished in Europe and South America in the first part of the nineteenth century.

On a quiet side street in Rio de Janeiro stands a building with a classic façade, above whose portico is carved: 'O Amor por Principio, e a Ordem por base, O Progresso por fin,' which may be translated from the Portuguese as 'Love for a beginning, Order for a foundation, and Progress for an aim.'

This is one of the very few Positivist churches in the entire world, although at one time this religion, founded on the high philosophic principles of Auguste Comte, was strong in France, Germany, and England, and numbered among its adherents names like Richard Congreve, E. S. Beesly, and Frederick Harrison. Positivism, which has always appealed especially to men — and to men of intellectuality — still exists in all of these countries, but in diminishing numbers. In Brazil, however, particularly in the southern part, it is a tenacious political and religious factor.

The Positivist body at Rio de Janeiro was organized in 1881 by Benjamin Constant Bolelho de Magalhaes, usu-

ally called Benjamin Constant, and considered the founder of the Brazilian Republic, and the majority of the men who assisted him were Positivists. From the beginning — this church was built in 1893 — the sublime rationality of Positivism was immensely popular with the educated classes and claimed eighteen hundred followers. Now the number who regularly attend the Sunday 'conferences,' as the services are called, are so few that a wag has summarized the situation by describing Positivism as the religion of 'three persons and no God.' But the sect is strong enough to maintain not only its teaching and lecturing program, but to support, in the same building as its auditorium, a printing office and a school where children are grounded in the austere teachings of the great philosopher.

The auditorium behind the classic façade is strange indeed in that land of richly decorated Roman Catholic churches, for here are no saints in glass or plaster: no tombs or confessionals or chapels where candles are burning — only the colored busts of Shakespeare, Descartes, Dante, Saint Paul, and other thinkers and leaders, exemplifying the Positivist belief that no single person, but the sum of all noble existences which have preceded us, reveal the one collective being in whom they all coexist. At the end is a full length painting of what appears at first glance to be the Virgin Mary, but the face is that of Clothilde de Vaux — the inspiration of Auguste Comte for so many years. A highly cultivated and noble woman, whose husband was a clever man — not clever enough to be a good husband — she is the female figure necessary in every religious cult, and this portrait of her symbolizing humanity also repre-

sents another fundamental tenet. The Christian religion, say the Positivists, has tended to swerve from the divine to the human — from Christ to his Virgin Mother. The Positivists reverse this order — emphasizing the growing divinity of mankind. In their lofty ethical system they state that man should not only seek help from the Being he serves, but should be of use to that Being. In rightly discharging our duty to humanity we augment her power, thus lightening the struggle, not for ourselves, but for our successors — which sounds very much like a certain well-known statement of William James.

In the most extreme contrast to this calm and scholarly ideology is the miracle church at Penha. The Positivist church, with its classic façade, is close to the city street. The dainty, two-spired miracle church is reached by an hour's automobile ride from town, and perched upon a solid crag of bare granite like a pretty golden howdah upon the back of an immense elephant. Three hundred and sixty-five steps — one for every day in the year — are hewn out of the live rock, and during the four Sundays in October great numbers of pilgrims used to climb them on penitential knees. This excruciating ordeal has been abolished, along with the riotous dens which had incongruously assembled at the foot of the sacred mountain. But the faithful still make their pilgrimages during October, and both the church itself at the top of the steps and the chapel at the bottom are crowded with the crutches and artificial limbs which have been thrown away by the rejoicing cured. Other gruesome relics hang here in rows — replicas of diseased arms and legs and inward and out-

ward organs, graphically painted to denote precisely the malady with which the penitents were affected and of which they were healed. The little church itself is small and light, and, in spite of its age, delicately fresh and sweet, with a carved wooden pulpit which would do credit to the German work of the fourteenth century. It is quite worth the climb, this miracle church of Penha, commemorating the spot where three hundred years ago a man was attacked by a snake and a scorpion and cried on the Virgin for help. She appeared in a vision, placed one foot on the snake and the other on the scorpion, and the man in gratitude raised this church in her honor.

Beside these two extremes, symbolizing the emotionalism of the mediæval mind, and the ultra-rationality of the modern mind, Rio de Janeiro is stuffed as full of magnificent churches as a fruit cake is stuffed full of plums. Even the most cursory eye is caught by Gloria Church, on the top of a hill overlooking praça and hotel of the same name, with a file of palm trees behind and above it, and a cluster of bread-fruit trees below.

But only a few visitors to the city find the way to the secluded monastery of São Bento, up a winding drive that leads to a cobbled court. Both monastery and church open upon this court, their outer walls extending along the hilltop above the sea. From the stained-glass windows drift out the notes of an organ: across the court pass priests and lay brothers. Within, the heavily baroque effect of carving and gilding is redeemed by firm architectural structure. Immense censors and lamps of Portuguese silver — the work of Victor Mereilles — weighing

hundreds of pounds, hang from woven silver chains as thick as a man's arm.

Every inch of the carved wood of São Francisco Penitencia, which, with São Antonio crowns a hill in the center of the city, is overlaid with gold leaf which was mined in Brazil, sent to Portugal to be beaten into leaf, and returned to Brazil. The ground for this venerable edifice was purchased by two Portuguese brothers in the sixteenth century and the church itself built in the seventeenth. The floor is of Carrara marble laid in mosaic designs of great intricacy; the ceilings, both in the sacristy and the church, are barrel-shaped, with the age-darkened decorations painted directly on the wood. The French chapel is in gold and white; the 'primitive' chapel paneled in Bahia cedar. In the sacristy are cabinets of jacarondá, the hard dark rosewood of Brazil, finished with pulls and key holes of hand-wrought Portuguese silver. The sunlight splashes on the crimson velvet of prie-dièu, on the carved wooden benches in the loggia, and in the catacombs where the godly lie buried there is presumably no need of sun.

For the churches are still an intimate part of the daily lives of rich and poor, ignorant and educated, living and dead. And they have more ways than one of impressing their presence upon the people. From their hundreds of bells comes an almost continuous rhythm of the maxixe. One wakes to the sound of bells, one walks along the streets automatically keeping time to their beat, and finally one's whole consciousness begins to vibrate with the vibration of the bells. The noisy jubilation is as much a part of Rio de Janeiro as the scarlet poinsettia against the whitewashed

walls. Those who have called this city a Paradise — as many have done since Amerigo Vespuccio so declared it four hundred years ago — may substantiate their opinion by turning to a book, printed in Mentz in 1718. In it the learned author, Diabicus, employs four hundred and twenty-five pages to prove that the business of the blessed in heaven will be the perpetual ringing of bells. In which case the inhabitants of Rio de Janeiro are perfectly equipped for heavenly occupation.

CHAPTER XXIX

RIO DE JANEIRO: WALKS AND DRIVES

A VISITOR who has only a few hours' stop-over in Rio need waste none of it in wondering about the best way to spend it, for there is no city on earth which is prouder of its beauties, or more ready to display them.

Although, like the Amalfi Drive and the Grand Corniche, the Shore Drive of Rio labors under the increasing load of hackneyed description, yet like them it survives the commonplace and surpasses the most perfect praise. A taxi or a bus will whirl the dazzled stranger along the spectacular triple boulevard that sweeps, with bridle path, parks, and promenades, between the mountains and the dancing sea. Past fine hotels, the president's palace, the embassies, the city houses and gardens of fashionable folk; bathing beaches and band pavilions, statues of great men; churches whose charm is their antiquity, hospitals whose virtue is their modernity. Beira-Mar, where pink flowers hang over tan walls, becomes Gloria, where the houses are pierced by corridors like tunnels of snow splashed by scarlet poinsettias. Gloria becomes Flamengo, with long, half-glimpsed mirrors reflecting drawing-rooms in gold brocade. Flamengo becomes Botafogo, whose buildings pile up like soap-bubble castles. The musical series of names continues out to the white beach and glittering casino of Copacabana. Avenida Niemeyer carries one to rocky headlands above the open ocean. The road to Tijuca leads through forests and lush banana planta-

tions, past waterfalls and strange geologic formations, past airy villas on the cool heights — one crashing scenic effect after another, for Rio de Janeiro does not hesitate to gild the lily or refine pure gold. No, there is no danger of missing this drive; and no danger of missing Sugar Loaf and Corcovado, for these are the show places not only of Rio but of all South America.

Sugar Loaf, or Pão d'Assucar, is an ungainly bare block of granite slanting upward from the sea and forming one of the characteristic portals of the harbor. Visible from almost every point of the bay and the mountains, by day it is a rosy or a lavender hulk, by night a dim mass diademed with lights.

It is impossible to climb the sheer walls of this unique lump. To get to the top one must go by aërial railway. This waits at the ground level of the station demurely enough, but once the passengers are in, the doors are locked, and car and people swing smoothly out into space, suspended by cables, each one of which, they are comfortingly assured, could support a hundred and fifty tons. The trip of eighteen thousand feet and the ten minutes it takes seem much longer than they really are, as the car gradually leaves the ground and makes its first landing at the top of Morro da Urca, a steep little mountain six hundred and sixty feet high. Here passengers alight, walk over to the other side and take another car, similar to the one just left. Again they swing into space, and rise slowly over the tops of the trees. Again they approach a perpendicular wall, feel the car slide into its landing quite nonchalantly and find themselves on the top of Pão d'Assucar.

THE SHORE DRIVE, RIO DE JANEIRO

It is not that the position is so very lofty — it is only about twelve hundred feet above the sea — it is its strikingly advantageous position. From here we can look out across the ocean: can look down into the entrance to the harbor with its vessels steaming through: can see the bay and the islands and the complete outline of the city. Each separate beach and suburb and the main avenues are definitely visible — a delightfully complete and comprehensible cyclorama. At night the scene changes totally. The sea dissolves into invisibility, merging with the blackness of the sky. One sees only a thousand thousand lights, like constellations in an inverted heaven, and connecting our starry perch with this distant bowl of light, a tiny cable car — a speck of brightness against the void — traveling across from peak to peak.

Like the rounded hulk of Sugar Loaf, the sharp hunch of Corcovado is a conspicuous landmark. Unlike it, it does not rise from the sea but from a range of mountains. It is reached by a cog railway that climbs steadily up a steep but not vertiginous incline. One goes on foot the last few hundred feet of the journey to a pavilion, and thence to a concrete pier over two thousand feet above the sea. From here is outspread an emotionalizing panorama. Far, far away, beyond the vague tops of churches and houses, an infinitude of islands float like clouds upon the bay. Beyond them on the opposite shore the clouds rest like islands upon the breasts of the mauve mountains. Land and water are indescribably intermingled, each blending into the unsubstantiality of the other. On every side the peaks of mountains fold away — away and away. A strange radi-

ance — a mist like a diffused nimbus — etherealizes everything. Birds and clouds drift below us. The city and its environs suggest, not a map, but a celestial universe such as the blessed damozel gazed on as she leaned out from the gold bar of heaven.

These, briefly, are the dizzying draughts which hasty travelers gulp in a few hours' stop-over in Rio de Janeiro. But the fortunate ones who may linger longer will find here, as elsewhere, delights granted only to those who discover them, not from the window of a car, but by leisurely explorations afoot.

While fifteen miles of the water-front are given over to the boulevard, bathing beaches, and seaside parks which are part of the famous drive, the other end, which was once a fever-stricken marsh, has been converted by skillful engineers and the labor of two thousand men for six years into the present sanitary and substantial docks, with their rows of electric cranes, customs house, etc. The sea wall is modeled after the one at Antwerp, twenty feet wide and seventy feet high, in places where the mud required the sinking of the foundations to the greatest distance. Now the largest ocean liners can come up to its edge in perfect safety, and travelers step off the gang plank into practically the center of the city, so that at the end of Avenida Rio Branco, which is the principal boulevard, are almost always the smoke stacks of some American or European steamer. Part of the social life is accepting invitations to dinner or luncheon on one of the transient palaces so miraculously come to rest within the very gates of the city.

Prodigious as the docks are, they, like the famous drive,

occupy only a section of the water-front. Between the two lie diverse neighborhoods, each with its individuality, its business, color, and savor. Near where the buff walls of São Bento rise sheerly from the sea, the mainland is connected, by a high-swung iron bridge, to Ilha de Cobras, the naval depot and headquarters of the marines. Smaller vessels find anchorage here — Amazon River boats, cruisers, yachts, and freighters.

Past these is the Praça Quinze de Novembro, with its stone steps leading down to the ocean, and its artificial cove for fishing boats. Once royalty resided here, and there was a fountain which supplied water to the ships in the harbor. Now royalty and fountain have gone. Modest shops are on one side and the ferry station on the other, and the principal habitués are fishermen and sailors in gaudy colors, and sailors' sweethearts with gold hoops in their ears, and those ubiquitous dogs who bear witness in their small bodies to Brazil's problem of miscegenation. At evening the humble Praça Quinze de Novembro again gathers to itself trailing clouds of romance. The ocean liners steam out through the harbor: the lighted ferry boats dart to and fro: music floats in from a battleship or a private yacht anchored near by. The sky flares into orange and rose, and flushes into orchid, and as it gradually fades the church bells begin to ring, and vespers sound from the cathedral near by. But this is morning. The ferries are bringing commuters from the principal islands and from Nictheroy across the bay — that city, popular with the polo-playing English, and also the capital of the State of Rio de Janeiro.

Just beyond the ferries blazes the colorful market-place. Fishermen are crowding up the steps to it, with baskets piled with gleaming fish and shrimps. Toward it, like shepherds strayed from the Bible, come tall figures leading sheep and goats. Women with huge round baskets of oranges on their heads swing easily along, and donkeys stand waiting, their panniers jammed with squawking fowls. They all find their way inside the market gates, and merge in the crisscross maze of narrow streets, lined with small shops which do not boast doors, but only iron shutters to pull down at night. On the threshold of each stands the proprietor, framed by bunches of bananas, or strings of wicker-incased bottles hanging head down, or by long braids of pearly onions. In a shop lined from floor to ceiling with wooden cages, turkeys and geese are complaining and pretty Chinese and Japanese ducks thrust out their dainty bills between the bars. There may be a crate or two of live rabbits, and most certainly an inquisitive monkey and a few parrots to add to the general odoriferous turmoil. In the glittering blue-and-white-tiled butcher shops hang great pieces of the coarse-grained beef which retails for six cents a pound. In handwoven baskets on spotless counters wriggle snails and crabs and enormous shrimps; silver mackerel, and sardines like jewels, and a whole fat yard of pompano for less than a dollar. The green-grocer's is a motley rainbow of coconuts and pineapples and tropical fruits. Cheeses are the entire offering in the next pocket of a place, and jams and marmalades, nuts and preserved fruits the sole stock of others. Baskets of every weave and size and shape fill another.

Out in the narrow streets every one is good-naturedly jostling every one else. Calves, pigs, and goats are tethered almost anywhere, awaiting purchasers.

Beside the regular market twice a week, public markets are held in the various open squares of the city. To these 'free markets,' as they are called (operated under the strictest municipal regulations), the small farmer brings his produce, and the humble purchasers carry home their bargains in bits of newspaper or homemade baskets.

One of the largest of these free markets springs up bi-weekly under the arches of the ancient Carioca — that two-century-old viaduct which no longer carries water but electric trams into the city.

It was in the middle of the eighteenth century that the intrepid monks, not content with leading earthly souls to heaven, determined to bring down heavenly water to earth. They had to hew a path through the virgin forest infested with pestilential insects, with wild beasts, poisonous reptiles, escaped prisoners, and hostile Indians. When they reached a point now called Devil's Bridge, the wooded slopes of the mountain gave way to absolutely bare rock, falling without a break for sheer hundreds of feet. Did this give them pause? Not them! Driving heavy iron spikes into the rock, they suspended their crude scaffoldings and proceeded, building as they crept slowly around the perilous scarp. In the face of the granite they cut a flat ledge with an outer elevated lip to keep the water in the trough, thus hewing an aqueduct indeed out of the very stone. In this way they guided the water for half a mile around the outside face of a mountain, apparently un-

scalable. The story runs that after they had completed this prodigious labor the governor sent a bill to Portugal for building that part which now marches in such conspicuous grandeur across the city. Portugal complained at the exorbitant price. It was two hundred dollars.

The line of this remarkable engineering feat may still be followed on tram and on foot and is one of the most interesting walks in Rio de Janeiro.

It leads first to Largo da Carioca, which received its name from the fountain erected there in 1724. To its thirty-five bronze spigots for many years the people came with their earthen jars for their daily supply of water. The fountain was razed to make room for increasing traffic, but those born within a certain radius of the spot still like to call themselves Cariocas, and to claim that Carioca water makes women's voices soft and musical.

The tram which started out over our heads on the old viaduct emerges on the road, and we may either continue on it or proceed on foot up Santa Theresa hill, every curve of which reveals fresh breath-taking views of the city and the bay. We North Americans, who think ourselves so clever, were not clever enough to lay out the residential hills of Brookline, Massachusetts, or San Francisco in any such winding roads and terraces. For on Santa Theresa hill the glorious old retaining walls which confine the winding street are sometimes thirty or even fifty feet high, and marvels of stone masonry. They open to give glimpses of gardens, some with their walls faced with the blue and white Dutch tiles which found their way into Brazil when Holland invaded the northern coast in the seventeenth

century. On certain of the tall gate posts stand the big blue or yellow porcelain pineapples imported from Portugal a century ago, and still, we hope, bringing to the household within the good luck of which they are the symbol. Over the gray walls spill floods of bougainvillea. Variegated crotons line the paths, and birds are singing in the golden shower trees. Enormous brilliant butterflies — many of them to be caught to-morrow and made into iridescent jewelry — drift near enough for us almost to touch their slow wings. Many of the bright-colored houses are entered from the street directly onto the top floor, and drop in the rear three or four stories down the hill. Here and there are sudden rifts in the hill, crammed with small houses overhanging the steep sides. Through the narrow frame of open doors we look down steep flights of steps to the streets below, and down to the distant water.

Rio de Janeiro is like the palm of a hand with many fingers extending back and up into the hills. For two cents one may travel in open trams for half an hour or even an hour in almost any direction and watch the city unroll into suburb, and the suburb into mountain or seaside hamlet. Passengers climb in quietly: well-built men, perfumed in a manner strange to our northern nostrils; women with gleaming hair; beautiful children with those melting brown eyes that seem to be looking for such different things in the world than do blue eyes or gray. No one resents the tourist: there is none of that antagonism veiled with sycophancy so constantly encountered in Europe. The tram threads its leisurely way through streets of humble shops, where the wooden shoes and straw sandals of the poorer

people are hung up for sale; past second-hand shops with some of the clothing under cover and some of it festooning the sidewalks. On every corner stand street peddlers with cakes and coconut confections displayed on the wooden stands which, when folded up, are carried on the head. The car goes so slowly and is so near the sidewalk that one can look directly into the dark slits of shops where men are cutting marble, and into others still narrower where women are trimming hats. Perhaps the route penetrates a bright valley; perhaps it comes out in a cobbled square where children are singing in a schoolhouse, or a maternal goat is following her own milk route with great composure. When the car reaches the end of the line there is nothing to do but wait for five minutes and then commence the descent which costs another two cents.

Beside the strolls or drives into the hills and along the water-front, the city itself offers endless opportunity for exploration. There are many parks, each with its own individuality. Passeio Publico is the oldest, and was for a century the most fashionable. That was when its terrace overlooked the sea and was closed by wrought-iron gates. Now the terrace is gone and the gates are gone, and high buildings are pressing close about it. While much of its former privacy has disappeared, it is, like all the parks in Rio de Janeiro, kept well watered and its grass is swept every day with a palm leaf broom.

In the large Jardim da Praça Republica in the congested part of the city, many members of its zoo stroll around in perfect liberty. The cotia, something like our muskrat, sits on its haunches and eats out of its front paws. Peacocks

and other land and water fowl strut over the grass, and long-legged herons stand on one foot and admire their reflections in pools. Children are playing a game something like battledore and shuttlecock, called petecca. Old women are sitting in the sun. On the streets which border this park are Government buildings, a military medical dispensary, and a row of intriguing junk shops that occasionally yield a Récamier couch of century-old jacarondá, that hard, dark, native rosewood almost like teak, or a carved bed or chair, or a bit of antique Portuguese silver.

Praça Tiradentes is named for the first martyr of Brazilian liberty, who, inspired by our revolution, headed a band of patriots to throw off Portuguese domination, and met with the usual fate of those who rebel and fail. The popular square which commemorates him is full of animation. There goes a carregador — the donkey without a tail, as he is unkindly called — for he carries on his head or pushes in his cart trunks and grand pianos and coffins and coals. The quitandeiro is a merchant who brings fruit and vegetables to your door in panniers suspended from his shoulders by a yoke. The padeiro carries his basket of bread from house to house, and the venders peddle live chickens in their donkeys' basket panniers. They are all scurrying or sauntering across the square where children are playing with their kittens and puppies, for unlike many Latins, the Brazilians are gentle with animals. We sip our coffee at a sidewalk café, and watch the pretty girls who have kept the lustrous hair of the old world while acquiring the graceful legs and ankles characteristic of the new.

Now twilight begins to sift in, and with the first sparkle of the electric lights the city becomes doubly animated. Down the wide Avenida Rio Branco automobiles carrying fashionable folk to and from concerts and cafés fall into flashing files. The promenaders make a solid mass down the narrow Rua do Ouvidor. This smart shopping street, lined with jewelers' shops filled with Brazilian diamonds and semi-precious stones and the latest Parisian importations, is closed to vehicles, so that the thronging pedestrians can see and be seen.

Gay as the downtown district is, transplendent as is the water-front with its triple rows of lights, its islands scintillating like Christmas trees, its ferries and motor boats darting back and forth across the reflecting surface of the water, yet it is back upon the hills that Rio de Janeiro comes into her most complete enchantment of the night.

Up on a certain high shoulder of Santa Theresa the hill suddenly splits wide, cleaving a ravine with houses and shops clinging crazily to its sheer sides, while a narrow street winds dimly along the bottom below. Leaning over the wall one looks down a telescopic ray of light into an unsuspecting balcony, or into a small room, one whole side open to the air, in which half a dozen men — their faces illuminated by a single light in the center — are gathered around a table to play at cards and drink. A child runs up the street, and from this distance looks like an insect scampering along a phosphorescent thread. Somewhere a dog barks and a girl on a balcony laughs as she signals to a man waiting below. Lights dance and go out. Windows which were dark become squares of brightness.

Girls and youths are always strolling in that air which is soft as spring and fresh as early autumn. People are singing, and their true, strong voices flow out from the long windows which are never closed. No matter how late the hour, dark-eyed children peer out between the high iron rails enclosing the tiled courtyards, and servant girls with bundles on their heads gossip in the angles of the wall. Down near a corner café where the iron tables stand out on the sidewalk and waiters in white coats are serving coffee and wine, there is a hole in the wall which calls itself a 'Loja de Sapateiro,' or a cobbler's shop. Here all day long over a single battered bench bend two gray-haired men. Tit-tat go their hammers, and flish-flash go their needles, and at midnight they are still stitching away like pixies at an enchanted task.

As we lean over a parapet the city may be seen far below like a jeweled queen: a necklace encircling Guanabara Bay, a diadem crowning Pão d'Assucar. Down her sides are flung chains of brilliants which heap up in pools of light in the valleys. Over all arches a star-spattered sky.

Ah, bewitched and bewitching city, in which one may stroll all night long, or get up at three to water the garden, or never go to bed at all — are you still glittering through your velvet darkness? Are your people still singing through the night?

CHAPTER XXX

PAQUETÁ, ISLAND OF LOVE

Every traveler to Rio de Janeiro knows Guanabara Bay, upon which it is situated, but only those who have time to linger may discover one of its most darling treasures — Paquetá, the island of love.

To get to Paquetá we must cross the bay: must watch the multicolored water-front of the city recede behind us into dreamlike folds: must watch the sharp crook of Corcovado Mountain soften into a deep shadow slanting across the sky. Guanabara Bay is encircled by mountains, their perfect sweep broken only by the spectacular channel entrance. As we drift across its gentle undulations we can take in a cyclorama of over a hundred miles. At first it is the familiar buildings of the city which hold our gaze: we can distinguish the golden image on the cathedral, the spire of Gloria Church, the high yellow walls of São Bento monastery rising from the sea. The details fade, and now it is the general mass which we recognize: the rise of Santa Theresa hill, the clear curve of Beira Mar —— And then these beloved landmarks drift into cloudiness and only the distinctive outlines of certain mountain tops tell us where we are.

We pass islands — Guanabara Bay is credited with over two hundred of them. Some are merely bits of granite a few yards in circumference and quite bare, except, perhaps, for a solitary bush that is clinging, Nature alone knows how, to the naked rock. Fresh cleavings on the granite

rehearse in stone the geological drama of the formation of Guanabara Basin — with its foundation of hard rock, covered by a top layer of sand or detrius.

Many of the islands are large enough for a house or two, a garden, a landing, and a clump of palms. Governador is the largest of all, being six miles long and one to two miles wide. It was of great strategic importance in the early history of the country and here the founder of Rio de Janeiro, Estacio de Sa, met his death in 1567 while fighting the French. Now it is quite thickly settled, and is used for aviation purposes. It passed hands once for two hundred milreis — about twenty-five dollars — recalling some of the prices paid for New York real estate not so very long ago.

The shore line changes and shifts. We can see vaguely the mountain of Penha, its bare summit crowned by the two spires of its miracle church. From this same point we can see the distant tower of the Oswaldo Cruz Institute, founded in 1901 and named in honor of the doctor who stamped out yellow fever. It is magnificently built and equipped as a station for research work and for making serums — a monument to science, as Penha is a monument to faith.

As we are carried across the smooth surface of the bay, the mountains on every side are a deep purple at the water's edge. Rising, they shade into blue, then into lavender, and finally their gray tops merge with the gray of the sky. And here, coco palms fringing her pretty shore, with pink walls, tiled roofs, the white pillar of a garden glinting through tropical foliage, is Paquetá.

This adorable fleck of land is only a little more than a mile long and less than half as wide, and as we draw nearer we distinguish the curve of its nicely built sea wall, note a line of royal palms — that remnant of princely association whereby hangs a tale — and see the fishing boats — dug-outs painted green outside and pink inside like long slices of watermelon, drawn up on the beach.

A handful of children and a dog or two watch us as we step on shore. They are friendly but not over-curious. Warmed by the sun, fed by the bread-fruit trees and by the free and never-failing bounty of the sea, clad in a single garment, the children of Paquetá, like their elders, are calm.

And now the town and the island — for they are one — lie before us. On the wide curving street which encircles the shore, stand old-fashioned victorias, drawn by two horses, each with a bell. You may make a leisurely circuit of the island in one of these if you choose. Or next door you may rent a bicycle and spin up and down — for Paquetá has a hilly interior — and crisscross the maze of narrow streets. But if you are wise you will start out on foot, up the straight main street, closely hemmed with shops, houses, and cafés, and ending abruptly a few hundred yards from where it started, in the beach on the other side. Now we have crossed the island at its narrowest point — for it is shaped like a bag tied in the middle — and we may turn either to the right or to the left. It makes no difference. Everywhere we shall find solid old stucco walls, faded into rose and mauve; we shall find beaches edged with feathery Bahia coco palms and scatteringly animated

by a fisherman or a group of swimming children; we shall find little open parks or public squares, with swept sand underfoot and spreading shade trees overhead and benches made of half a split tree on two concrete standards. Everywhere we shall see sagging tiled roofs, of blended reds and browns, with ferns growing out of their crevices, and smell the savory odor from outdoor kitchens and hear the flutter of tattered banana leaves in the wind.

But if we go west we shall come to something which is quite different from the simplicity of the rest of the island. We shall come to a house and garden built for a lady by a king. The same Dom João VI, who was Regent of Brazil from 1808 to 1821, and afterward King of Portugal, who founded the National Library and planted the first palm tree in Brazil, used often, in a swift galley manned by a dozen oarsmen, to take the same water route as our launch of to-day. Only he landed where the water laps the steps of a walled garden, and we are standing outside, on the road, peering in between the bars of the high locked iron gate.

There is a flutter on the other side of the grill and a tiny old woman with nose and chin almost meeting, like the wizened fairy godmother in a Rackham drawing, is questioning us in a toothless dialect. She cannot catch what we reply, for she is deaf, and neither could she understand if she could hear, but she is flattered by our admiration of the place, and so she unlocks the great gate and beckons us to come in. Thus we step across the threshold of the past and find ourselves in a garden still faintly redolent with its royal romance of a century ago.

There are palm trees here and an arbor, but the charm of the place is its great antique terrace, surrounded by a low white wall which forms a continuous seat of masonry overlooking the blue, blue sea. Here indeed is a fitting background for whatever the imagination may picture of a long-forgotten lady in whose honor Paquctá was named the Island of Love.

The house which Dom João built follows the simple colonial lines and is one of the best examples left in Brazil of that architectural period. It is one story high, with a hall running from the front door to the courtyard at the rear. On either side the hall are large rooms with massive carved furniture of jacarondá. The courtyard is enclosed on two sides by long low wings, their heavy weather-stained tiles sagging with years. The house with its verandah makes the third side, and the mountain, impenetrable in its tropical verdure, forms the fourth. For the rest, there is an orange tree and a bread-fruit tree and an old well. It is very quiet here in the courtyard — as quiet as in the palace where the Sleeping Beauty lay. Dead leaves are on the ground and the shriveled dame who has been showing us about seems akin to them. She is so very old that we find ourselves fancying that she might have been here when the young king used to come hurrying over the water in his galley and his lady stood on the terrace steps to greet him.

We wander about in the bright Brazilian sunshine. There are many rooms in the long wings. In one stands a bathtub of marble, carved imperially. The tiles on all the floors are exquisite in design and color. But it is not until

we leave the courtyard and explore further that we come unexpectedly upon a secluded bower. Surely this deeply carved marble balustrade, these mural paintings on the verandah walls, these quaint statues brought from Portugal long ago reveal the more intimate trysting place. What contrast between this carved casket and the fiercely primitive tropical vegetation which crowds it close! Urbane and elegant, the forgotten pavilion still maintains its privacy, with a dead palm tree across its threshold.

The island of Paquetá seems very unsophisticated as we step out again into its village streets. Fish nets are drying on bamboo poles, smoke is rising from the outdoor kitchens which are nothing but crude rock fire holes bearing an iron pot or two. We pass a man pruning a tree by the method of tying a stone to the end of a rope, throwing it over the bough and yanking it. We see a Negress in a purple turban standing under a purple bougainvillea vine; we see an old lady in a lavender dress and gray shawl against a background of lavender mountain and gray cloud, for all colors find their complement here. Children run by carrying oranges in their hands; a donkey with panniers loaded with fish; an oxcart with bells; three tourists on bicycles... Yonder on that sheer scarp of mountain, men are hewing a long wide flight of steps out of the live rock. Who is going to live on that airy bluff, overlooking this scene of perpetual sunshine, of white beaches and trees burdened with strange brilliant fruit? Some one who appreciates it, without doubt, for all those who live in this Eden love it as it should be loved. On the nights when the moon is full all the electric street lights are turned out, 'because the moonlight is more beautiful.'

A double row of royal palms — those that we saw as we approached — makes us pause. What is this touch of aristocracy in the midst of such naïvete? We read a marble plaque on the gate post. The Portuguese inscription translates thus:

In this House
was entertained
The Prince Regent
Afterward King John VI
1808–1821.

There are other sites in Paquetá worthy of notice. Here is all that is left of the house which sheltered José Bonifacio de Andrada e Silva, by many considered the most important figure in Brazilian history and admitted by all to be the most spectacular. A university professor of highest attainments, countless of whose scientific memoirs were published in Germany and never translated into his native language, he established his reputation as a scholar throughout all Europe. He was also a poet of vehemence and passion, publishing his poems under the name of Americo Elysio in 1826. But he was, primarily, one of those burning patriots whose life sears an indelible mark on the history of their country. He already had a long line of ably filled official and military posts behind him when he threw himself into the Brazilian struggle for liberty. He has been likened to Washington in his original attitude of aversion to independence from the mother country. And like the North American whom he so ardently admired, it was he, who, after Brazil had gone into housekeeping for herself ordered the arrangement of

the furniture and set the standard for her free life. Less fortunate than Washington, however, he saw his country take a direction he was convinced was mistaken. He started a struggle against the radical currents. He lost the contest, was brought to trial as a conspirator, and directly after this tragedy betook himself to Paquetá. Not until 1838 did he die at Nictheroy. José Bonifacio, as he is usually called, is one of those tremendous personalities whose varied life encompasses the whole history of his time.

Another name associated with Paquetá is that of Joaquim Manoel de Macedo, a novelist whose still enduring popularity started with the publication of 'Moreninha' ('The Brunette') a story laid on this island and dealing simply and sentimentally with the triumph of love. This book has never been translated into English and would seem perhaps a little tame to our frank and stirring generation. But it is very dear to all Brazilians, who always show strangers, the moment they arrive in Paquetá, the very peak where the lovers used to meet — the same promontory which the Tamoyes Tribe of Indians used as a signal station.

We stroll along the little straight main street. Here are small clean cafés where we may have bread and cheese and sardines and a cup of that Brazilian coffee in comparison with which all other coffees are as 'Moonshine is to sunshine and as water is to wine.' Or there are pergola-ed gardens near the water where excellent native beer is served.

For those who like best the quietness of this small

drowsy universe week days are better than Saturday or Sunday. Then the ferry boats are filled with holiday crowds. On every Sunday in October there is a special religious festival in the church of Saint Roque, to which worshipers come from great distances. Very devout indeed is this ceremony, which is celebrated in the morning at seven thirty and again at ten thirty. And very gay indeed is the little carnival which, true to the Latin interpretation of Sunday, follows it in the afternoon and evening.

Yes, Paquetá is adorable. Perhaps its history past and present is not quite as replete with events as the statistician demands. But then, to paraphrase a little, the happiest islands, like the happiest women, have no history.

CHAPTER XXXI

RIO DE JANEIRO TO BAHIA
BRAZILIAN DIAMONDS, BLACK AND WHITE

Few travelers, except those on especial business, make any stop in Brazil after leaving Rio de Janeiro. The Munson, Prince and Lamport and Holt Lines, whose schedules on the East Coast are comparable to those of the Grace Line on the West, make only brief pause, in the five thousand miles between here and New York. This is at São Salvador, commonly called Bahia, from the rather confusing Brazilian custom of referring to the principal city in any state by the name of the state itself. And since the great vessels hurry northward without other pause, the illimitable half-awakened region of jungle and river and plateau, which forms two thirds of a country larger than the United States, and which holds at least half the population of South America, floats by to the west unseen. And yet this vast expanse of country is pouring forth an uninterrupted stream of riches into the markets of the world.

For instance, from Minas Geraes, a state of about the area and population of Texas, come the hardest and the most brilliant diamonds known — diamonds that are used in the cutting of all others. Time was when Brazil produced practically the world's supply of these precious stones, succeeding India, whose fields had gradually ceased to yield. At the beginning of the nineteenth century the King of Portugal had a collection of diamonds

which John Mawe, 'a person devoted to mineralogical pursuits,' and the first Englishman to journey on a royal passport through Minas Geraes, declared unequaled by that of any other potentate on earth.

With the discovery of the South African mines in Kimberly in 1866 the product from Brazil fell to about four per cent. But although the proportion was so drastically reduced, the stone retained its value because of its quality. Beside being the hardest diamond known, it has a transparent heart, instead of the dark center of its African rival. That is why the Tiffanyite of thirteen carats, from the Bagagem mines, and now in the Metropolitan Museum in New York, is adjudged the finest blue and white diamond in the world. The Estrella do Sul, which was given to her master as the price of her freedom by the Negro slave who found it, now belongs to the Rajah of Baroda, and ranks among the costliest of catalogued gems. That is the reason for the fame of The Regent, weighing nearly an ounce, and named after Dom João and worn by him on all state occasions. The largest rose diamond ever found was mined recently in Brazil in the same section where the Southern Star was discovered in 1852. It weighs a hundred and eleven carats and when cut will weigh forty carats and be worth five hundred thousand dollars. Several perfect rose stones can also be cut from it.

The Kimberly Mines are gruesome with stories of workmen who cut slashes in their legs and arms and even in the soles of their feet to secrete a purloined stone. There is the story of the man who gashed out one of his eyes, had a glass one put in, and months later hid the diamond he had

stolen behind the glass eye. At Kimberly the mining camps are behind triple enclosures of barbed wire, spaced so far apart that nothing can be thrown from one to another. Armed guards strip the workmen daily for examination, and at the final retention camp where the workmen are held before they leave at the end of their contract, they are kept for several days and drastically purged to make sure that they are carrying away none of the stones they invariably and hopefully swallow.

But these conditions do not prevail to any extent in Brazil, because the mines are not worked by hired native labor as in Africa, but by 'garimpeiros' who handle their own claims, after the fashion of our independent gold diggers. Of course there are feuds and wars among them and of course in the mines owned by companies or in fields where the owner hires labor, there must be the strictest vigilance. But even in Diamantina the conditions have not yet necessitated the stringent regulations of Kimberly.

The garimpeiro is an independent and possibly an occasional diamond digger. He usually sells to a buyer who comes to him, and the buyer in his turn takes the stones to Rio de Janeiro, which is Brazil's diamond market.

The casual observer would not recognize this buyer as a man possessing riches, any more than he would recognize the mass of rough stuff that looks like peanut brittle as cascalha — the container of precious jewels. Dressed in filthy garments that suggest a sewer cleaner's, he saunters into the dealer's office — ten thousand, or even a hundred thousand dollars' worth of rough stones tied up in a dirty handkerchief which is stuffed into his hip pocket, or

perhaps packed into a hollow section of bamboo corked at one end, the natural joint making the bottom at the other end. He looks so ignorant that it is hard to realize that for the next few days he will be engaged in colloquies as secret as those at Versailles. It is extremely difficult for an outsider to get permission to witness one of these transactions. All of the men engaged in it — for there may be several dealers and also more than one buyer — need all their concentration for the business in hand. Any spectator would have to be watched and no one has time to watch any one besides those involved. And yet the actual mechanics of the process appear simple enough. The rough diamonds, some of them loose and some of them imbedded in cascalho, or intercolonite, are dumped on a piece of white paper. The trained eye of the dealer quickly distinguishes between the material which will be salable for ornamental purposes and that which is suited only to industrial use. He shoves them into piles: this pile for ornaments, this pile for industrials, and this center pile for bortz — or for grinding other diamonds. He makes these divisions quickly and then offers a certain amount which is the first step in a prolonged bargaining. Finally, however, the deal is closed — the terms, as in every transaction in diamonds, being strictly cash and the value being reckoned in sovereigns or florins. The profit on rough diamonds is small — only two per cent — which, however, mounts up when one is dealing in kilos!

After half an hour or so, our dealer, being a swift worker, is in possession of a fair proportion of the stones offered for sale. The best of those suited for ornaments he keeps for

his own jewelry trade. The second best and all the industrials he sends to Europe for sale, as Antwerp, not Rio de Janeiro, is the market for industrial diamonds. Incidentally, it is Antwerp and not Amsterdam which is at present the center of the diamond industry — a transfer which occurred about fifteen years ago. Now it is Belgians who are the most valued cutters and polishers, and to Belgium go the buyers and dealers from all over the world. Most of the workmen in Brazilian shops are Belgians — brought over for this purpose.

Beside the gems which he sells outright to Europe our dealer also sends a number of those he has bought for his own trade to Antwerp to be cut. For this service he must pay an outgoing tax of nine milreis on each gram of weight. When the stone is returned to him he must pay another tax of fifteen per cent on whatever the cutting — or the benefit, as it is called — cost. For instance, if he pays nine hundred dollars for the cutting, he must pay fifteen per cent on nine hundred dollars return tax. As this fifteen per cent must be paid half in gold and half in paper, it mounts up to forty-two or forty-three per cent. Even so our dealer declares that he can sell you your Brazilian diamond, which has been cut in Antwerp, cheaper than you can buy it elsewhere.

Speaking about duties, there is a duty of ten per cent on all rough diamonds taken into the United States; a duty of twenty per cent on all unset, and eighty-five per cent on all set diamonds. It will readily be seen that one may take the brilliant out of the setting and pay eighty-five per cent on the latter, and twenty per cent on the

stone, and have the two united in New York for a dollar. It is rather a disappointment for people who relish smuggling to find that the customs officials are inclined to be indifferent to a single ring or pin worn into the United States. The law is framed for wholesale dealers and professional buyers, and the casual traveler who wants to slip by without declaring his small personal purchase can usually do so.

We saw our dealer separate his merchandise into ornamentals and industrials. The black or industrial diamond, known in the trade as carbon, is tougher and less brittle than the crystalline substances. In fact, it should not be classed with ordinary rough brilliants or bortz, as it has no cleavage planes and no tendency to fracture or split, but with friction wears slowly away. It stands, with the jewel stones, as the hardest of all known substances, and specimens have been found weighing over three thousand carats. Carbon is used in countless manufacturing plants. The automobile industry alone buys about five million dollars' worth a year to dress its emery wheels. The points of saws used in the mines must be carbon, and it is used in airplane parts, radio accessories, Diesel engine parts, etc. Even so, it may be roughly stated that only twenty-five per cent of the diamonds mined are sold for industrial purposes. The remaining seventy-five per cent go to adorn the necks and ears and fingers of women. Astonishing to consider the dangers, the hazards, the enormous sums involved in a trade whose chief end is to satisfy vanity or appease jealousy! There is, of course, another factor here. Diamonds are, in a sense, cash. While certain

old-fashioned cuttings may depreciate the value of a brilliant, age itself enhances it. Thus a diamond that was worth a hundred dollars after the Civil War may easily be worth a thousand to-day. And there will always be lovers of the antique who will prefer old gems, even cut in an outmoded style. Therefore many of the diamonds which are ostensibly jewelry are, in reality, solid securities.

There is little to see in a typical jeweler's office. The shop with its display of precious and semi-precious stones, and its dainty trifles inlaid with butterfly wings, is on another street. Here in the office are only the unset stones, the uncut stones, the stones which are being cut and polished at this moment on the machines over by the window, and the few valuable museum specimens which the dealer — who is a lover of diamonds as other men are lovers of horses or dogs — keeps in cotton wool in small wooden boxes in his safe, because he cannot bear to be separated from them. Now turning to one of these heavy safes at his back, he brings out a drawer in which are neat rows of worn leather folders. He selects a certain folder, opens it and reveals another row of white paper envelopes. He chooses one of these, spreads it wide, and you see on the white paper perhaps one, perhaps a dozen colorless stones. With a delicate instrument made especially for picking up these precious fragments, he lifts one up and holds it to the light. It sends forth a tiny blaze of brilliance. Will this suit you? Then begins the long business of parleying.

In the early mining days in Minas Geraes horses were shod with gold, and men offered to one another gifts of

Midas, such as oranges and bananas fashioned from the soft shining metal. Nuggets were the medium of exchange. To-day diamond mining offers employment to five thousand people in the interior. And yet Brazil has recognized, along with the rest of the world, that wealth is not determined solely by the minerals and metals that lie beneath the earth, but by the crops and cattle above it. And, therefore, we find this State offering model farms and demonstration school farms, agricultural courses, a college of agriculture and veterinary science, and subsidizing a large number of private schools.

For from Minas Geraes and Matto Grosso come the millions and millions of cattle which feed the meat eaters of Rio de Janeiro. Beef is the great staple of Brazil. The capital city alone consumes half a million pounds daily. The coarse-grained beef, which is a cross between European stock and the humped Indian zebu, retails for six cents a pound. It is nutritious and the conditions of slaughtering and buying are so carefully supervised and regulated by the government that it reaches the consumer in good condition. For three different fiscal inspectors must pass on every piece of beef that is sold in Rio — once on the hoof, once directly after slaughtering, and a third time before it is bought by the retailers. Beside this half-million pounds of fresh beef — fresh because it must be delivered in Rio on the same day that it is killed — the city hotels and restaurants buy a great amount of chilled and frozen beef. Another hundred thousand pounds of pork, veal, and poultry make up Rio's daily consumption. The prices are regulated by law. Every meat market is

closed from twelve noon until three in the afternoon to give a chance for fresh butchering. They are open Sunday and closed Monday. Since the Brazilians insist upon two kinds of meat and sometimes fish or fowl as well, at both the noon meal and night one, the butchers have a thriving trade and so do the uric acid specialists.

We see neither the State of Minas Geraes nor the one of Matto Grosso on our northward voyage, but we do steam slowly into a harbor loosely locked in long green banks, and anchor for a few hours in Bahia de Todos os Santos — the Bay of All the Saints.

The city of São Salvador, commonly called Bahia, sheers abruptly up, several hundred feet from the water, its level crest and precipitous sides crammed with buildings, buff and blue and rose. Their steeply slanting roofs and narrow façades are packed as closely as matches in a box. Jutting above the long straight skyline of the cliffs they brace themselves by buttresses against the sides. To accentuate still further this high unevenness, three hundred churches thrust their spires and turrets into the bright tropical air. On either side of this elevated congestion, the land sweeps down to sea level, its low silhouette broken only by slanting feathery coco palms, and, on the promontories that push into the ocean, by crumbling forts, a lighthouse or two, and steps half worn away by centuries of ebbing and flooding tide.

Docks and ship-chandlers' shops line the convoluted and malodorous lower city, but carriages will carry us up the winding road, or one of the funiculars will bear us up a steep incline to the upper city, stacked so cunningly along

the high ridge line, where the air is sweet and stirring. Up, up, between high masonry walls, pierced here and there by a wrought-iron gate, or by a noble doorway, narrow cobbled alleys twist off and disappear, and the bougainvillea flings its purple shower over the garden gates.

Suddenly we are in a plaza, whose floor is of black and white mosaic, and whose walls are the façades of churches. And such churches — six in this one square, their tiled towers glittering, their antique bells quivering, and from their crimson-curtained portals the odor of incense faintly drifting.

Should we step inside we should find such wealth of carved and polished wood, such overlay of gold leaf and inlay of marble, such shrines set with jewels, that we should be bewildered. Perhaps for a moment we should feel that we are, somehow, in Italy. But the bare feet of the folk devoutly kneeling on the cathedral floor are black and brown: the painted birds that decorate the ceilings are not the peacocks of Veronese or the doves of Tintoretto, but the parrots and parroquettes of Brazil. And those soft brown frescoes of biblical scenes upon the walls are not frescoes at all, but antique tiles. We are in a world as unlike Europe as it is unlike the United States. We are in Bahia, or São Salvador, to give it its formal and correct name, the oldest city in Brazil, and at one time its capital.

Here Thomé de Souza, the first Portuguese general of Brazil, made his home in 1549. Here was the seat of the bishopric in 1551 and of the archbishopric in 1676, and here, for years, the ships of war have put in to receive their blessing before starting forth. The spacious palaces of the

princes of the church are still standing, their stone doorways lavishly carved, their garden walls set with the stone pineapples brought over from Portugal two centuries ago.

Although it has lost some of its ancient prestige, Bahia remains one of the most important maritime cities of the republic and follows Rio and São Paulo in size. Vessels from all over the world are continually passing between the long green arms of woodland which embrace Bahia de Todos Santos and every approaching vessel is assailed by a fleet of dug-outs and tow boats loaded with a screeching, fluttering cargo of tropical birds, and lighters loaded with cacao, faintly sickening in its pungent odor. For more cacao is shipped from here than from any other port in the world except Accrá on the west coast of Africa. Tobacco, too, and oranges — the California navel orange originated here — cotton and copra. There is no longer any whiff of oil, although at one time this was the headquarters of a large whaling fleet.

But inland, a little distance, there is no sign of this international commerce. The palaces give place to villas along the beach; the villas to huts of mud thatched with palm leaves on the hillsides; to fields of pineapple, their sword-like leaves silver in the sunshine; to plantations of bananas, their huge leaves tattered by the wind. Here black people live without apology or a sense of inferiority. North Americans, accustomed to servility or impudence in a race which it considers as capable only of being servants or clowns, look with amazement at the majestic, rhythmical gait of an ebony-skinned woman, clad in a

voluminous skirt of pink and green, a lace shawl upon her head. Black men, quite unconscious of the proximity of the white, tell their beads reverently in the churches. Black children frisk on the sands and dart in and out of the water, while the sunshine smiles on them with a caressing impartiality. Bahia was the center of the slave trade of Brazil until the middle of the nineteenth century, sometimes importing as many as sixty thousand in a year, and even now the city is called the Old Mulattress, for over ninety per cent of her children are of African descent. But the heavy cloud of slavery dissolved long ago in this light-shot air. Now the dark figures moving up and down the narrow streets and in and out of the shadowy churches, their gleaming skins beautiful against the cream-colored walls, and like polished ebony under the baskets of oranges carried upon their heads, seem inhabitants of a world allied to the Arabian nights of our childhood, where through domed palaces and spicy gardens moved brown girls and tall chocolate-colored men in turbans.

We have accepted it as one of the limitations of being grown up that we could no longer pass through the tranced gates of storyland, or wander in hidden courts. And lo, they still stand waiting for us to enter, golden in the sunshine, silver in the moonlight of Bahia.

CHAPTER XXXII

PERNAMBUCO

DIAPHANOUS folds of pale gold and lavender are drawn like veils across the distant horizon of Pernambuco, strongest of the northern States of Brazil, and deriving its name, as do so many sections of our own country, from the native Indians who first roamed its deep forests.

As our course curves nearer, the diaphanous folds intensify into promontories and plateaus, with palm-fringed beaches. The sails of fishing boats and native rafts bob with the white caps, but it is not these simple craft which distinguish this coast, but larger, swifter ones, swooping down from the skies. For Pernambuco is destined to become one of the chief airports of the world for through traffic, since between this shore and that of Africa the sea barrier is narrower and the weather less exacting than elsewhere. Here ultimately will be established the station where air routes from the United States will converge with those from the old world and proceed together down the coast.

Yonder closely built-up headland is Recife, the capital of Pernambuco, the fifth largest city in Brazil, and an old settlement before Jamestown was founded. Recife means reef and refers to that coral reef which extends from just south of Rio Doce to Ceará. Built upon part of this reef and with a fine harbor, Recife was the headquarters of the Dutch when during the first quarter of the seventeenth

century it looked as if those hardy adventurers had come to stay in Northern Brazil. But in spite of their tenacity, they were partly driven out and partly bought off by the Portuguese in 1661, as three years later they were to be pushed out of New York. All that remains of that stormy time are a few old Dutch fortresses, some in ruins and some converted into arsenals along the coast, and certain tow-headed, blue-eyed children who would seem more appropriate upon a dyke beside the Zuyder Zee than on a tropical beach.

Should we land at Recife we should find a handsome city with opera house and Governor's palace and mosaic sidewalks. And since it is intersected by two rivers and their streams, there are many bridges, giving a Venetian lightness to the scene. Here is published the oldest newspaper in South America; here are splendid parks and shops and residences. From our passing boat one sees nothing of this substantial culture. The distant Recife, white above its white beaches and whiter clouds, slides by like the city in a dream.

And now something white glitters on a hilltop, the roofs of houses and churches glisten in the sun, and the red walls of a cañon cut the green hillside. This is Olinda, the first capital of Pernambuco. 'O Linda!' the sea-weary sailors exclaimed centuries ago, as they sighted this pleasant shore. 'O Linda' means 'all beautiful' and the musical name still holds. That long white building crowning the crest of the hill, and set off by the towers of the cathedral, is a monastery. The many churches jostle against one of the most important radio stations in South America.

PERNAMBUCO

When Olinda was deposed from its rank as capital it gracefully accepted the rôle of summer resort and suburb of Recife, to which city it is joined by a long isthmus. The tall white tower on this isthmus is not a lighthouse, but a sugar refinery, for Brazil is fourth in the list of sugar producers of the world, and in the State of Pernambuco alone are over a hundred mills of the most modern type and thousands of smaller ones.

The sun twinkles on the roofs of Boa Viagem, a summer resort connected to Recife by a tram which runs through a grove of coconut palms on one hand and winding beaches on the other. The blue land grows fainter and fainter and swims away into the sky and drifting clouds, and this is the last we shall see of human habitation on our homeward journey.

CHAPTER XXXIII

THE AMAZON COUNTRY

THERE is a river in Brazil larger than the Mississippi — longer than the Nile. Great ocean liners can steam up it for twenty-three hundred miles and smaller vessels can penetrate the navigable waters of its system for forty thousand more. It drains over two million square miles, and its current is so powerful that it muddies the Atlantic Ocean for a hundred and fifty miles out to sea. In its mouth there is an island the size of Belgium.

This river flows through jungles that have never been explored. No one knows the extent or richness of its timber. Few indeed are the travelers who proceed very far up that mighty waterway, which widens to six miles in some places and in many others narrows so that one can touch the dense foliage rising in solid walls of green on either side, and 'see the nests of wasps upon the trees, like gray shields hanging there.' The water, stirred by the passing boat, washes against settlements which are only a huddle of huts, whose inhabitants have never penetrated a mile into the humid jungle behind them: who live by casting a net into the river at their front door and picking a banana off a tree at their back door. Their only furniture is a hammock or two. Many of them have never heard the white man's language, either English or Portuguese: many have never seen a white woman.

H. M. Tomlinson, whose 'Sea and Jungle' is the odyssey

of this river and this region, describes it thus: 'The forest of the Amazons is not merely trees and shrubs. It is not land. It is another element. Its inhabitants are arborean; they have been fashioned for life in that medium as fishes to the sea and birds to the air. Its green apparition is persistent, as the sky is and the ocean. In months of travel it is the horizon which the traveler cannot reach, and its unchanging surface, merged through distance into a mere reflector of the day, a brightness or a gloom, in his immediate vicinity breaks into a complexity of green surges; then one day the voyager sees land at last and is released from it.'

The land he sees, after a thousand miles of slow steaming up that watery highway is Manáos — a city with an opera house and mosaic sidewalks, and stucco façades. In the days of 1868, when Brazilian wild rubber was selling for a hundred and forty dollars a pound and the owners of this commodity breakfasted on champagne, Manáos, capital of the State of Amazonas, and Belem, capital of the State of Pará, were the richest cities of their size in the world. And in defiance of that savage fecundity which smothers a clearing almost as soon as it is opened, Manáos still stands, a testimony to man's subjugation of the jungle.

There is another city upon the banks of the Amazon, without mosaic sidewalks, without stucco façades or balustraded promenades. And it is a different testimonial to man's conquest of the wilderness. Four hundred miles from the mouth of the Amazon, a little south of where its tawny flood meets the black waters of the river Tapajoz,

there is a neat and orderly encampment where the humblest house has running water and electric light; where sanitation is enforced; where hospitals, schools, canteens, and moving-picture houses provide for the well-being of its inhabitants. This is Fordlandia, where in 1928 Henry Ford established, at the invitation of the United States of Brazil, the beginning of his rubber plantations.

The quality of Brazilian rubber, like that of Brazilian diamonds, has never been excelled. Para is still the synonym for the finest and strongest rubber that can be produced. At one time the Amazon region was producing ninety million pounds of this rubber annually — practically the world's supply. Then it dropped to less than five per cent of that.

For the old cruel unorganized method of gathering the latex was destructive both to the trees and to the terrorized laborers who worked them. England and Holland established rubber plantations in the East Indies: cultivated them scientifically, cared for the workers, provided economical systems of transportation — and plantation rubber forged ahead of the Brazilian wild product in the markets of the world. Now Henry Ford is using the most advanced plantation methods upon the richest natural rubber region of the globe, and the ultimate result is obvious. Typical examples of the magnificent disorder of the nineteenth century and the efficiency of the twentieth, they stand — Manáos and Fordlandia — upon that great river which drains two fifths of the continent of South America.

It is this Amazon region which has been the melting pot

ON THE AMAZON

for the diverse racial elements which have finally produced the still inchoate Brazilian people. Up and down this humid breathless river paddled the aborigines — those docile Indians whose ancestors the intrepid Jesuits endeavored to Christianize, and whose descendants stand, with expressionless faces, as we steam past their congregation of mud huts. The spice-hunting Dutch stamped their impress upon Northern Brazil; the French Huguenots made a try for it. Spain won the country in 1581; English pirates prowled around and over it; the importation of African slaves inundated all in a black flood. And finally, in 1661, the Portuguese flag floated from what is the present French Guiana to Rio de la Plata. Now, regularly comes a yearly shipment of Japanese families to Pará, to work upon the rubber, rice, cotton, tobacco, sugar, and cacao plantations. Japan hopes to settle a thousand families, averaging four persons each, annually for the next ten years. (This, incidentally, is only one per cent of the annual population increase in Japan.)

Red men, black men, white men with yellow hair, and white men with black hair, and now yellow men. And Brazil absorbs them all, assimilating them after her fashion — the most conspicuous and complete example we have of a country where the equality of races proceeds without feuds, antagonisms, or prejudices.

It is impossible to foretell the future of a country whose past is so buried in racial conglomeration, and whose present lies shrouded under a heavy veil of moist heat — a country where, if one gashes the ground to build a house, the jungle swallows the clearing almost in a night.

Brazil, with her supreme city of Rio de Janeiro; Brazil, with her mines spilling over with diamonds and gold, her air perfumed with coffee; her millions of miles of uncut, unsurveyed timber! We see nothing of this Brazil as our vessel steams northward past the mouth of the Amazon. We see only the sea and the sky, and shall see only these for many days.

BY ANY OTHER NAME

THERE is a necromancy of names. Long before we detect that haze which envelopes an unknown shore, seen from an approaching ship, there has been born of our imagination, and of the syllables of its name, a place. We picture the streets. We envision the people. We hear the sounds of its bells, and the clatter of its horses' hoofs. And when, at last, we actually reach that shore — behold, the streets run at different angles; the rhythm of life within it moves to a different tempo; its color, its scent are totally unlike anything we had predicted. Confronted thus by reality, the image born of our fancy, and of the mystical vibration of its title, vanishes, forever. Henceforth that name will mean for us this tangible scene, upon whose soil we have stepped, and whose objects we have touched with our own hand.

What becomes of that first region, so long a part of our mental geography? Perhaps it still exists in another world, waiting for new imagination to call it forth. For certain it is, this actual country before us slips, irrevocably, perfectly, and permanently, into the syllables of its nomenclature.

So it is that South America, mapped out from our firesides, is alluring as Paradise is alluring. And yet, as the fabulous seas and cities dissolve into the realities of that mighty continent, we find that what is last is best. The stark and verdureless Peruvian coast whence come the

nitrate and the guano to make the gardens of the world; Santiago de Chile, high-girdled by its mountains of snow; the pampas of Argentina rippling to the horizon — these outrun our vain previsioning. Musical as are the words, Rio de Janeiro, they do not convey a fraction of the fascination of that gemmed city, filigreed by its bays and lagoons.

Names — names! A necromancy in names! A necromancy in Paquetá, with its green boats, pink-lined, like slips of watermelon, drawn up on its tiny, enameled shores. A necromancy in Bahia, with tall negresses treading its ascending streets. A necromancy in Recife, with its tesselated walls and filaments of bridges. Names! Names! A rose by any other name would smell as sweet? Ah, never ... never...

THE END

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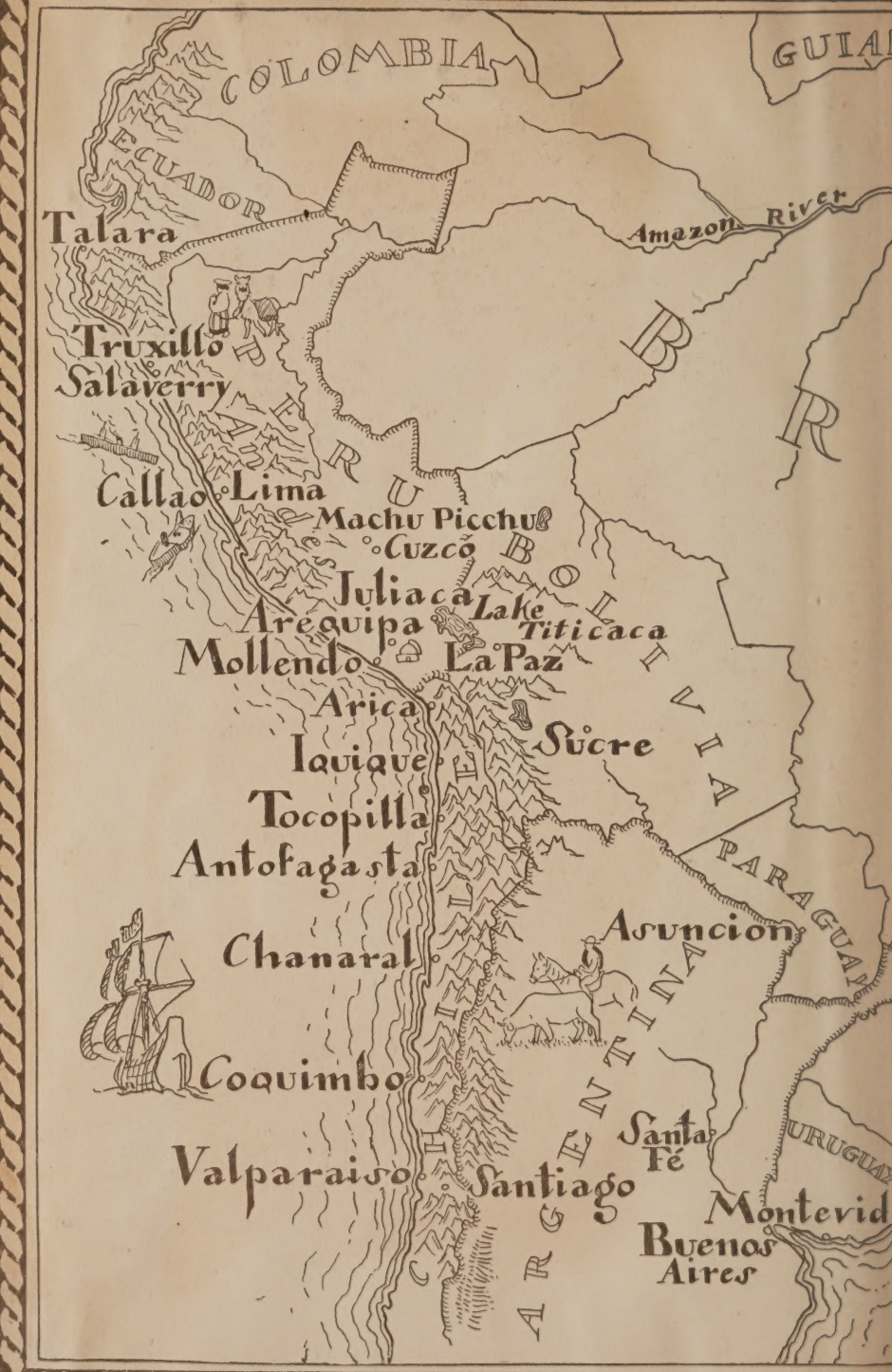
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